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NEW SECTION

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POLICE

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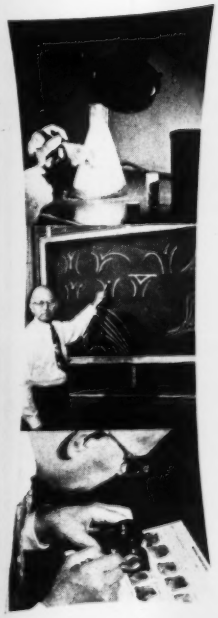

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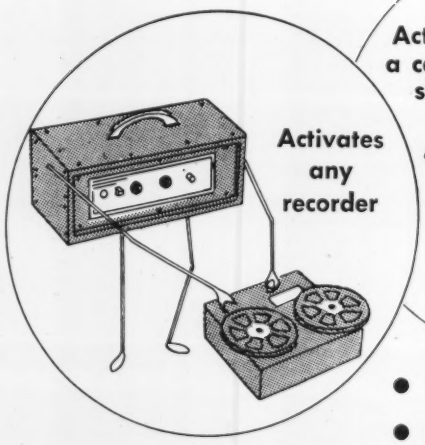

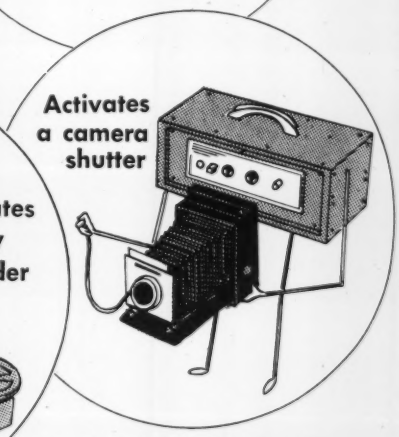

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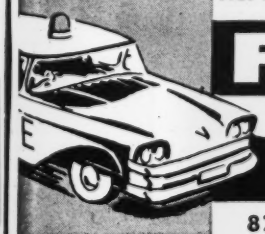

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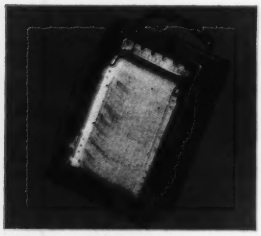

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EFFICIENCY. A new section providing much-needed information concerning statistics as a tool of management. See page 61.

Cover Picture

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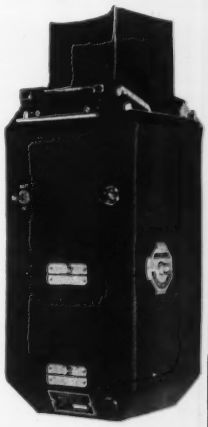

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Psychographology in Handwriting Identification

By James M. Reinhardt

EDITOR'S NOTE: *Dr. Reinhardt is Professor of Criminology at the University of Nebraska. Author and lecturer in the fields of Social Psychology, Criminology and Abnormal Behavior, he brings to the task a wide and mature experience. Recognized as an authority in the field, his services have been in continuous demand as a lecturer in law enforcement training programs, including the Medico-Legal Division of the Harvard Medical College and the National Police Academy of the Federal Bureau of Investigation in Washington, D. C.*

The Editor predicts that the following article by Dr. Reinhardt, in which he refutes the "humbug" attitude toward Graphology, will stimulate a great deal of interest throughout the country. He states the case in clear, understandable terms, "I have heard outstanding criminologists, including some handwriting identification specialists, argue that psychographology is nothing more than a faker's trick. . . . Now, it is true that some humbugs have invaded the field of psychographology as they have also done in almost every instance of a promising effort to apply intelligence to some human problem. . . . The suspicious attitudes of many criminologists concerning the use of handwriting for personality studies are quite understandable. They derive largely from literature written for a time when little was known about the basic structure of personality. These earlier crude notions have found their way into many unauthentic sources on handwriting that are read and believed in our own day. These are sources that the popular "mind readers" use. They have nothing to do with genuine psychographology. . . . Properly understood and applied, it can serve a useful purpose in efforts to solve certain kinds of difficult handwriting identification problems. Its proper application requires not only an experimental knowledge of psychographology, but also a comprehension of the basic structure and nature of the human personality."

We hope, and we think this article will, go a long way in neutralizing a naive prejudice of long standing and lead the way to further research in what appears to be a rich area of scientific inquiry.

EVERY handwriting expert knows that his most trustworthy stool pigeons are the *suspect's* own little unmatched ways of putting things down on paper. The most telling of these ways are often mere trifles, but they may be determinative because they are inconspicuous and they are unique. Any attempt to deceive by altering these special handwriting features inevitably inhibits the habitual writing movement and produces a distortion. Such distortions carried consistently through a handwriting sample assume particular significance when observed in comparison with a parallel distribution of such features in samples of the normal handwriting of a *suspect*. Every experienced specialist in the field of handwriting identification knows that a few "unimpressive" similarities or distortions in a *disputed* specimen may be worth more than a page of sweeping uniformities.

The *psychological* import of the handwriting features that hold the psychographologist's attention are likely to be of little concern to the handwriting expert interested only in feature similarities. Such a one might even ridicule the assertion that handwriting has any psychological significance at all and he would certainly be slow to admit that the use of handwriting as an aid in the study of personality could possibly have any value for identification purposes. I have heard outstanding criminologists, including some handwriting identification specialists, argue that psychographology is nothing more than a faker's trick. The same critics often do not hesitate to judge character by the transient movements of the feet, hands, eyes, and lips; by the changing color of the skin and the tone and *tempo* of words. Now, it is true that some humbugs have invaded the field of psychographology as they have also done in almost every instance of a promising effort to apply intelligence to some human problem.

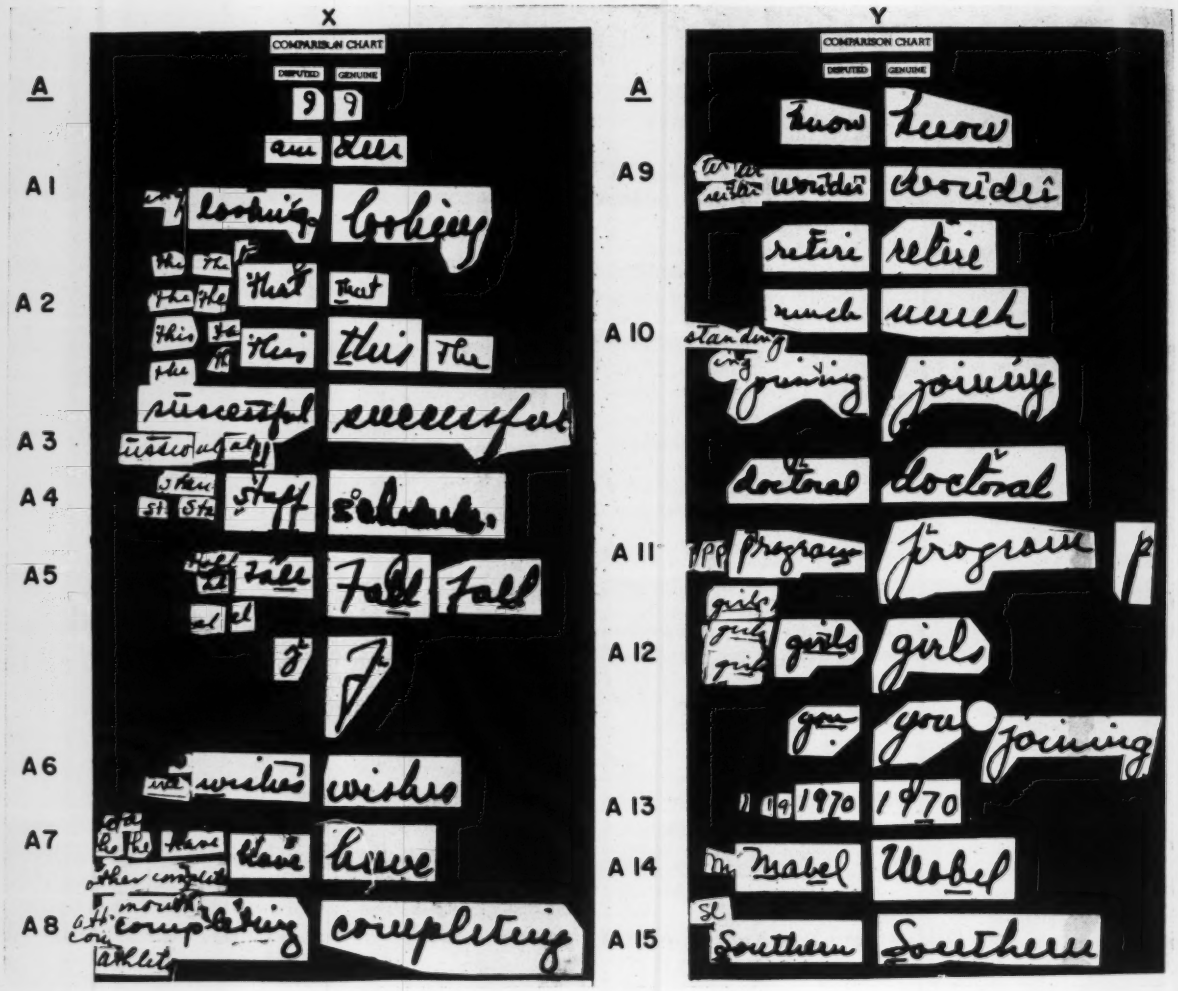
Handwriting is not simply an act of the involuntary nervous system. It involves the higher reaches of the brain. It not only says something, it says it in a unique way and the record is relatively permanent. A. S. Osborn speaking of the delicate artistic touch, once wrote: "The expression of this life is shown in the strokes themselves which indicate the controlled increases and decreases in pressure . . . combined with force and reserve power which all point to a physical organism of control. . . ."[1]

Osborn, a master of the science of handwriting identification, made no claim to a knowledge of psychographology. For all I know, he may never have expressed an interest in it. Yet his absorbing concern with the problems of identification gave him a keen sensitivity to the organic significance of writing touch, stroke, and pressure. Herein, exactly, is the heart and core of psychographology in theory and in practice. A man does not act in parts. The organism is not a mere collection of separate and distinct organs. The central nervous system is functionally enmeshed with the involuntary system. The effector and affector chains are of the total organism. A man walks, talks, and writes all over, not simply with feet, tongue or hand. His words may be deliberately chosen to deceive a listener, but the will to deceive is of the whole man, and every "glandstream," and "air way" is giving him the lie. But for

Address: Dr. James M. Reinhardt, Professor of Criminology, University of Nebraska, Lincoln, Nebraska.

* Based upon a paper presented before the American Criminological Society (formerly the Society for the Advancement of Criminology) December, 1956, in Fresno, California.

[1] *Questioned Documents*, 2nd Edition, New York, 1940.

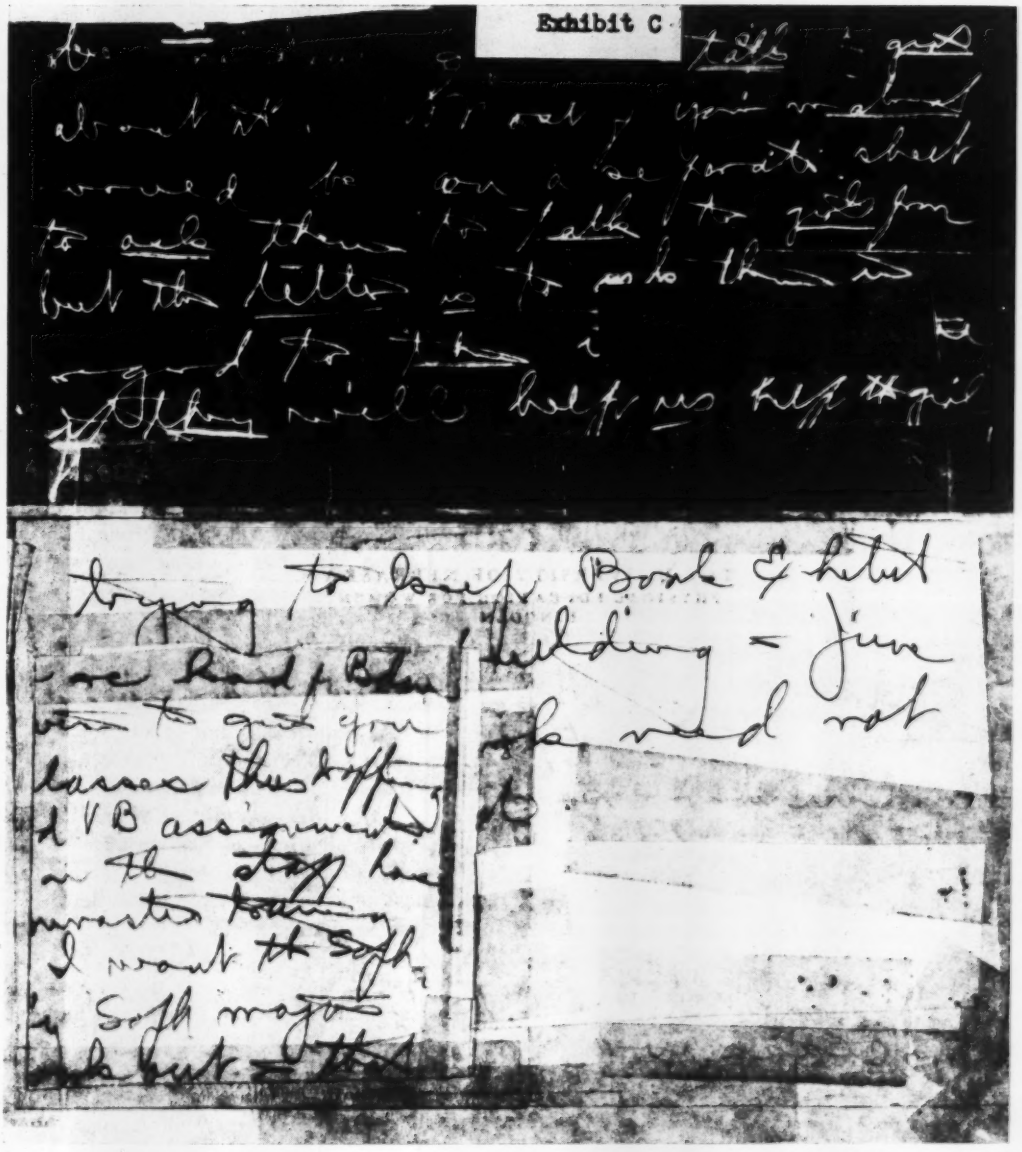


this fact, the "lie detector" would be as useless as a sorcerer's dream. I am sure that everyone has at some time been aware of the effect of an unhappy mental state or prolonged strain upon writing movement and pressure. This is, of course, a temporary condition. It must be remembered, however, that mood, temperament, will, self-control, confidence, judgment, and capacity are personality qualities. A certain continuity of such qualities gives the personality its structure—defines its "style."

Students of personality have long since put their trust—some of it at least—in observations of overt behavior. Personnel men in industry are doing it every day. Handwriting is a form of expression. Its unique characteristics are extremely difficult to alter, without distortion, by an act of will. These are the characteristics most important to the psychographologists.

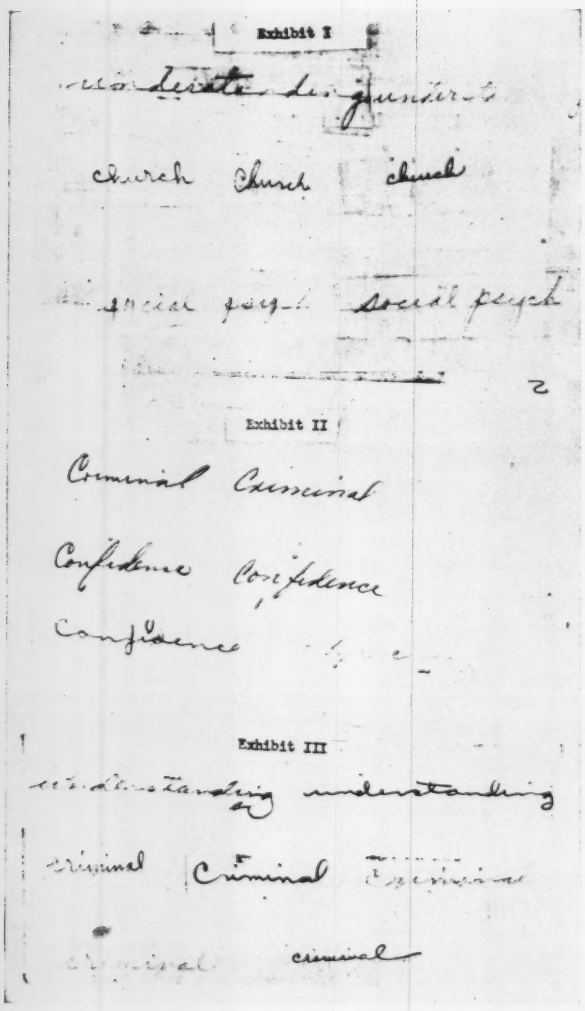
It has been shown experimentally that certain types of mentally disordered persons exhibit writing tendencies peculiar to the abnormality. *Paretics*, for instance, tend to omit certain letters consistently and to duplicate other letters. The writing of *manic depressives* is characterized by slow painstaking movements resulting in especially heavy pressure. The same is true of the writing of individuals suffering from involutional melancholia. Persons suffering from *hysteria* or *paronia* tend to write with large sweeping lines and to finish words with "meaningless" flourishes. The *hysteria* patient usually shows an exaggerated tendency to underscore words. These are definitely abnormal people and the specific writing features unique to the type stand out. The conspicuousness of the traits peculiar to the abnormality, however, emphasizes the fact that writing is a form of personality expression.

Every "normal" man has his own thresholds of anxiety; his levels of expression, of will power, his capacity for love. When he writes, he writes "all over." He gets "into the act." Let me illustrate with some elemental principles recognized by every handwriting identification expert. It is well known that the character of writing movement is a prime determinant of writing speed. Ordinarily it takes more time to make a short heavy stroke than to make a long light one; more time to form a small solid letter than to form a large "racy" one. A



short steady line without other modifying characteristics of the hand suggests a firmly controlled and purposeful movement. A featheredged "broken" line suggests a slowly executed movement. Angular letters, particularly such letters with breaks well above or below the normal writing zone, suggest a relatively slow moving hand, and usually such a hand gives evidence of pauses. Rounded letters are generally produced with a free swinging motion. In this type of writing the pressure will vary more than in small close angular writing. Now the significance of these writing traits for the psychographologists is in the fact that they do not represent isolated forms of motor activity but a total organism in action. The spontaneous writer, for instance, cares little for form. His concentration is on ideas. The exceptionally cautious man, the man of indecision, is likely to exhibit a cautiously written hand with evidences of retracings and halting movements. This is the individual's *writing* way of bolstering a weak ego. Such a hand is not to be confused with the carefully drawn and retouched letters of the artistic hand or the ornamental flourishes of an inflated ego. In all cases it must be remembered that any attempt to make a psychographological analysis of a writing sample requires a study of all the writing qualities in relation to each other. Any psychographological use of isolated features such as pressure, angularity, and size, apart from the total writing "style" is likely to lead to unhappy results.

The suspicious attitudes of many criminologists concerning the use of handwriting for personality studies are quite understandable. They derive largely from literature written for a time when little was known about



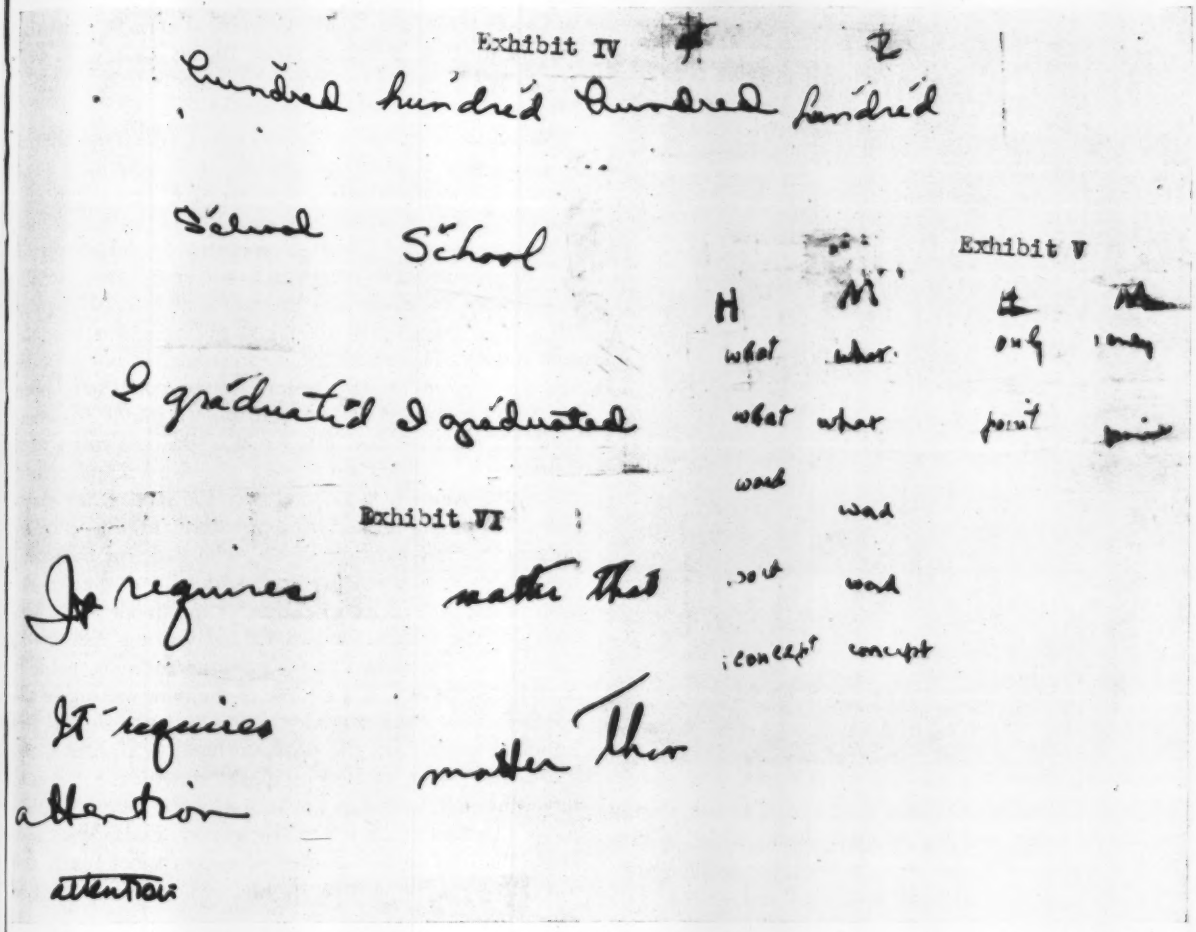
the basic *structure* of personality. These earlier crude notions have found their way into many unauthentic sources on handwriting that are read and believed in our own day. These are sources that the popular "mind readers" use. They have nothing to do with genuine psychographology.

Properly employed a knowledge of psychographology will serve a useful purpose in attempts to understand the basic structure of personality in many instances. It is the contention here that it can have practical value for the handwriting identification specialist under certain circumstances. Such knowledge may suggest profitable lines of investigation in instances where the writing specimens are exclusively limited or where in spite of convincing similarities the circumstances leave the expert in doubt.

Let me now show why this is true. A lack of smoothness, for example, in a writing sample suggests absence of spontaneity, but absence of spontaneity is not in itself indicative of an attempt to deceive. May I repeat, persons who suffer a keen sense of inadequacy, or who are overburdened with self-consciousness, tend to write with an extremely cautious movement. This fact has been established experimentally. As noted earlier also, the spontaneous writer is interested only incidentally in letter form. His concentration is on what he wants to say. Readableness is all that he asks of his writing. Such a hand is generally characterized by a somewhat indiscriminate use and placement of auxiliary characters as "i" dots, "t" crossings, and so on. Conversely, a slow writer tends to put these detached letter signs in the right place or slightly behind the letter.

Now the forger must break his own writing pattern in some ways in the execution of a spurious hand. The problems of identification are in a considerable degree modified by feature similarities in the habitual writing "styles" of the hands to be compared. While every individual has his own unique handwriting features it is generally easier for a forger to duplicate a writer who has been brought up in the same close writing environment or "style" and who most likely, therefore, has acquired the same writing manner as himself. Similarly, persons subjected to the same prolonged professional training and experience actually tend to show greater similarities of writing traits on the average than do persons with widely differing occupational backgrounds and experiences. There are many exceptions, but in the course of almost 20 years of experimentation with handwriting, I have discovered that marked similarities in certain special features of handwriting are more likely to be duplicated in the writings of people with similar ideological and writing backgrounds than in the case of individuals selected at random. This is illustrated in exhibits I, II, III, IV, V, and VI. In each of the exhibits, the writing specimens were made by a different hand, but in each exhibit all the individuals had experienced similar handwriting environments and they had majored or were majoring in the same field in a university. The seven samples in exhibit I were screened from the writing specimens of eighteen students in a class in Social Psychology. The samples in exhibit II were taken from the standard writings of fourteen students in a class in general criminology and the seven samples in exhibit III were taken from the handwriting standards of twelve students in an advanced course in criminology. Exhibit IV represents the standard hands of eight librarians and exhibit V represents the standard writings of two philosophers. In the case of the librarians, only eight writing samples were supplied. The two standards from the philosophers were selected from four handwriting samples supplied. Exhibit VI shows the handwritings of four professors of English.

It is not contended here that any standard writing specimens of any two or more of the hands represented in the exhibits would present an exceptional difficulty of identification by a handwriting identification specialist. The only reason for calling attention to these exhibits



at all is to illustrate a point emphasized earlier that certain similarities of handwriting experience produces similarities of special handwriting features that are important to the handwriting identification specialist. Note for instance the marked similarities of letter form, continuity breaks, and unique "t" crossings in exhibits IV, V, and VI. In such instances of similarity of unique handwriting features, the problem of simulation is made easier by the appearance of such features in two standard or habitual writing "styles"—that of the forger and that of the hand to be copied. This was demonstrated in a series of experiments with the hands shown in exhibits I, II, and III. It was noted also that the problem of "identification" was made extremely more difficult by the introduction of two writing specimens as "suspect" from the hands that wrote any one of the matched samples in these exhibits. This fact simply serves to emphasize the risks of relying upon certain notable similarities of so-called "non-imitable" features where a single *suspect* writing specimen is used.

An habitually slow, painstaking writer finds it harder to forge the hand of a spontaneous writer than to forge the hand of one who writes with his own inhibited movements; for in the former instance he will have to simulate an irresistible sweep of movement and a variability of pressure inconsistent with his own writing habit. Similarly, but to a lesser degree, the spontaneous writer finds it difficult to bring his free expansive writing habit into the "irksome" confiines of the slow hesitant writer. He will tend to pull the letters lower or higher, than the original, from the writing line. He will give evidences of movement slips here and there in a "t" crossing or an "i" dot. Moreover, an habitually slow writer may try to deceive with a light pressure, swinging movement. In this instance, the result will almost invariably be an abnormally light line and one perhaps that leaves spaces in large loop letters with no "tracing" evidences at all. This free swinging light movement is rarely emphasized in an attempted forgery of a *genuine* signature, but frequently where the *counterfeiter* is interested only in distorting his own signature.

Here we are dealing not simply with a matter of muscular habit but with a dispositional quality. The writer does not ordinarily think about the persistency of his habitual writing pressure and movement until he makes a conscious effort to alter them. Here the rhythmic light pressure writer forced to simulate an habitually slow heavy pressure writer feels handicapped all over.

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It is as if the entire organism were saying to the writing muscles "get this coercing job over with and let us turn quickly to originality." The slow inhibited nature "cries out" against the "reckless abandonment" of letter detail. The forced movement seems to be saying: "look what you are doing to my timid uneasy nature." In such a writing state the habitual hand results not only in obvious inconsistencies but the writer is invariably thrown back upon the use of his own little so-called "non-imitable" writing features. These are particularly likely to appear in such forms as loop lines, dots, crossings, angles and terminal lines.

No psychographologist worthy of the name would claim today that a study of personality through handwriting analysis offers any valid clues to identity in a case of a counterfeit hand. It is claimed, however, that mood and temperament affect writing movement and hence also stroke and form and that habitual mood and temperament influences individual writing habits. Accordingly, it has been demonstrated that a practical knowledge of the scientific application of psychographology to the problems of handwriting identification will throw light upon certain behavioral anomalies in a counterfeit hand. It is important to know whether the dispositional condition of the writer at the moment of writing was a temporary or constant state. A handwriting that shows spontaneity is rarely indicative of a temporary condition. That is to say, while psychological *ups* and *downs* in varying degrees are common among men, they are not likely to find volitional forms of expression in the habitually serene nature. What is more, attempts to simulate such forms are bound to make demands upon the personality that it cannot meet. In any case, it is well to review samples of the *suspects* scripts written at different times over a considerable period.

An actual case, now to be discussed, will illustrate the practical uses of psychographology in handwriting identification. Sometime ago, I was asked to investigate the handwriting of a person suspected of being the author of two spurious notes written on postcards and addressed to a departmental colleague in a university. One curious thing about the notes was the fact that the only person who could possibly be damaged by them was the *suspect* herself. The notes, totally irrational, if not a prank and if not prompted by sinister motives, could have been written only by one with an unbalanced mind. The complainant who, in this instance was the chairman of a department of which the *suspect* was also a member, had been professionally associated with the *suspect* for many years. The two notes had been previously examined by an outstanding handwriting expert, who had, for comparative analysis, only two writing samples, one that of the *suspect* and one of the chairman of the department who was also the complainant. *Standard* writing samples of the *suspect* are shown in the *genuine* columns, exhibits X and Y. Exhibit C is a sample of the handwriting of the accuser. Now if an examiner in this instance should feel impelled to attribute the *disputed* hand (Exhibits X and Y) to the writer of one of these "standards" it would have to be attributed to the author of the *genuine* specimens (Exhibit X and Y). The *expert* did indeed conclude that the senseless notes (*disputed* specimen X and Y exhibits) were written by the author of the *genuine* sample.

I quote in part, two brief passages from a five-page explanatory letter written in support of the conclusion. ". . . I reach the opinion that there was strong reasons to believe that 'E' and 'F,' the anonymous postcards, were written by 'R'. . . . I am compelled to reach the conclusion that the two anonymous postcards 'E' and 'F' were written by the same hand that wrote the 'R' handwriting standards above described."

In the case of my own examination, however, initial interest was in the psychographological significance of the two *genuine* hands and the *disputed* sample (X and Y exhibits, and exhibit C). In the first place the *genuine* hand of the *suspect* bore no *unique* signals of an irrational or delusional state of mind. Neither did the *disputed* specimen. There were, apparent to me, no evidences of attempted distortion of a normal writing habit in the disputed sample. The possibility of error in a psychographological interpretation is exactly what raises new questions to be investigated. Here the first question was: Why would an intelligent woman with long professional experience and in full possession of her mental powers address two perfectly *insane* notes to one of her own colleagues over the forged signature of their departmental chairman?

An examination of the hand writing of the complainant (Exhibit C) revealed significant writing traits indicative of marked instability, anxiety, and emotional insecurity. Note, for instance, the abnormal irregularity of line and writing base; the almost grotesque rounded swings giving way to absurd angularities and hair-like endings completely beyond the boundaries of a normal writing range. Note also the frenzied distortions of form, as in the "s" in girls, the complete omission of the "l" in the formless ending movement in "girls;" the "k" in talk. These are in the order of *frantic* movements. They have nothing to do with controlled ornamentation or with "dignified" ineligibility. Such a hand suggests the probability of a dispositional make-up that might well give rise to powerful personal prejudices, anxieties, and suspicions.

Investigation into previous professional relations between these two people revealed abundant evidences of a long standing antagonism toward the *suspect* on the part of the departmental chairman. The agonizing and chronic nature of the frustrations are suggested in such aggressive acts as attempts to remove the *suspect* from her job after fourteen years of efficient service; the promotion of young and relatively inexperienced members of the staff over the head of the *suspect;* unsuccessful steps to remove the *suspect* from the security of academic tenure, as well as numerous and torturous assignments, criticisms and reprimands. Significant also are evidences that the aggressive behavior on the part of the complainant were motivated by purely personal feelings.

For instance, when asked why two newly appointed young instructors were promoted over the older staff member's head (the *suspect* in this case) she replied: "If you had treated me the way you should have, you would have been given the promotion."

It occurred to me that the two *disputed* notes might conceivably have been written by someone else as a prank or for some other reason. I was not concerned with this possibility except insofar as the inquiry might help to answer the question as to whether the *suspect* did actually write the questioned notes. That was all that I had been asked to do. Here I turned to another psychographological principle referred to earlier in this paper, namely, the *dispositional* tendency of people, particularly certain kinds of professional people, possessing a unique commonality of interests, special types of experience and training, involving similarities of writing *styles* to exhibit more writing similarities than are found among non-selected individuals.

As already noted, there are many exceptions and the rule is not rigid, but the tendency is sufficiently well verified to warrant analysis in many cases. I was able to secure handwriting samples of two other departmental colleagues of the *suspect*. In the case of one of these the handwriting sample bore no pointed resemblance to the *disputed* sample in respect to those features that would ordinarily hold the attention of a handwriting expert. Handwriting samples of the other colleague are shown

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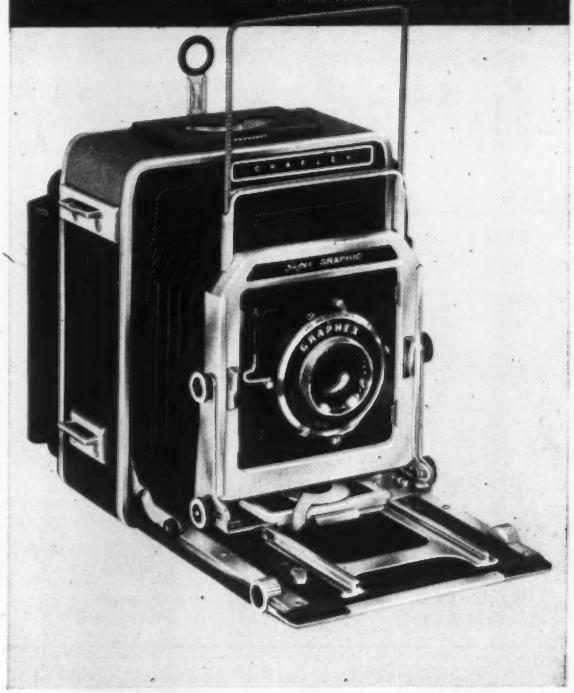

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close to the *disputed* specimens (exhibits X and Y).*

Let it be remembered that all of the writing samples identified by A 1, A 2, etc., are taken from the standard writing of an unsuspected person—a member of the same department as that of the *suspect*, but who, so far as I was able to discover, was on congenial terms with the complainant.

Space will not permit a detailed accounting of my comparative analysis of these two hands, that of the *suspect* and of a colleague, with the *disputed* copy. That is not necessary since any handwriting expert will be able to make these comparisons for himself.

Note the unique figure "5" *s* form in the *disputed* column duplicated in A 4 and the unique breaks in A 1, A 4, A 8, A 9, and A 10. In no instance does the *suspect* reveal this "5" *s* form. Compare *g* and *y* endings, the *t* crossings: A 4, A 8, and also A 9 and A 10 with *disputed* "doctoral"; as also *l* loops, down stroke loop line endings and the double *s* forms: A 3. Note the *p:* A 11; the *m:* A 14; and the confusing *s:* A 15. The identification expert could hardly fail to note the terminal *r* movement: A 9; and to overlook the unique initial movement in the figure 1: A 13, would be almost unforgivable.

An exhaustive presentation of all the significant and baffling handwriting features considered in this case would require an unwarranted amount of time and space. For instance, no reference has been made to the evidential import of certain trait-oddities observed under the microscope.

The one aim of this paper is to demonstrate the practical application of psychographology in certain instances where there are reasonable grounds for doubt in spite of singular similarities between the *genuine* and *disputed* handwriting samples.

Psychographology, as I have tried to show, may serve in many cases to suggest other lines of fruitful investigation, the results of which may alter a final conclusion. It is important, however, to remember that psychographology has its limitations. It offers no substitute for the exacting tasks of handwriting identification. Properly understood and applied, it can serve a useful purpose in efforts to solve certain kinds of difficult handwriting identification problems. Its proper application requires not only an experimental knowledge of psychographology, but also a comprehension of the basic structure and nature of the human personality. ★★★

* In all instances the disputed writing specimens in the comparison Charts X and Y are to the immediate left of the *"lanes."* The handwriting samples of the *suspect's* colleague introduced by me are further to the left and are identified for comparative purposes by the symbol A 1, A 2, and so on to A 15. Unfortunately, I was unable to secure more than one page of the handwriting of the colleague used in this comparison and hence could not match all the letters in the *disputed* column. This, however, is not too serious since, as every really qualified handwriting expert knows, such similarities as shown in the comparable specimens to the left do not occur by accident. They represent similar writing *styles.* What is more, the approximations of these two hands are not confined to general features but to so-called "non-imitable" or special features.

Crime Prevention

By Chief Daniel S. C. Liu

EDITOR'S NOTE: *Out in the PARADISE OF THE PACIFIC, Chief Liu presides over the Police Department of Honolulu, where his record as the Chief Police Executive has attracted widespread attention. Chief Liu took the first merit system competitive examination ever given in the Honolulu Police Department. That was in 1932, shortly after a survey and reorganization of the Department had been completed. He was one of a handful from among two hundred sixty applicants who passed the examination. Chief Liu had the important experience of serving in every branch of the Department. He was a radio patrolman until January 1, 1935, when he was appointed Sergeant. He became a Lieutenant of Police on January 1, 1941, and at the same time was appointed Secretary of the Police Commission.*

Continuing his meteoric rise in the Department, on May 1, 1945, he was appointed Captain of Police, and became an Assistant Chief of Police on January 8, 1945. Three months later, the title was changed to Deputy Chief of Police. Then on July 24, 1948, following the retirement of Chief William Hoopai after thirty-four years of public service, Liu was named Chief of Police. Recognizing his contributions to the service, members of the International Association of Chiefs of Police elected to hold their 1957 Annual Convention in Honolulu, September 29, 30, October 1 and 2.

A TREMENDOUS and critical challenge today faces a crime-ridden society and particularly society's established forces of law and order. In all the known history of crime and punishment, only a more humane expectation and demand in the matter of retribution against the transgressor has been achieved. Crime itself continues apace, and the prospects for prevention, control and eradication are scarcely encouraging. Social reforms pointing towards the prevention of crime have not kept abreast of social developments in other fields.

Address: Chief Daniel S. C. Liu, Police Department, Honolulu, Hawaii.

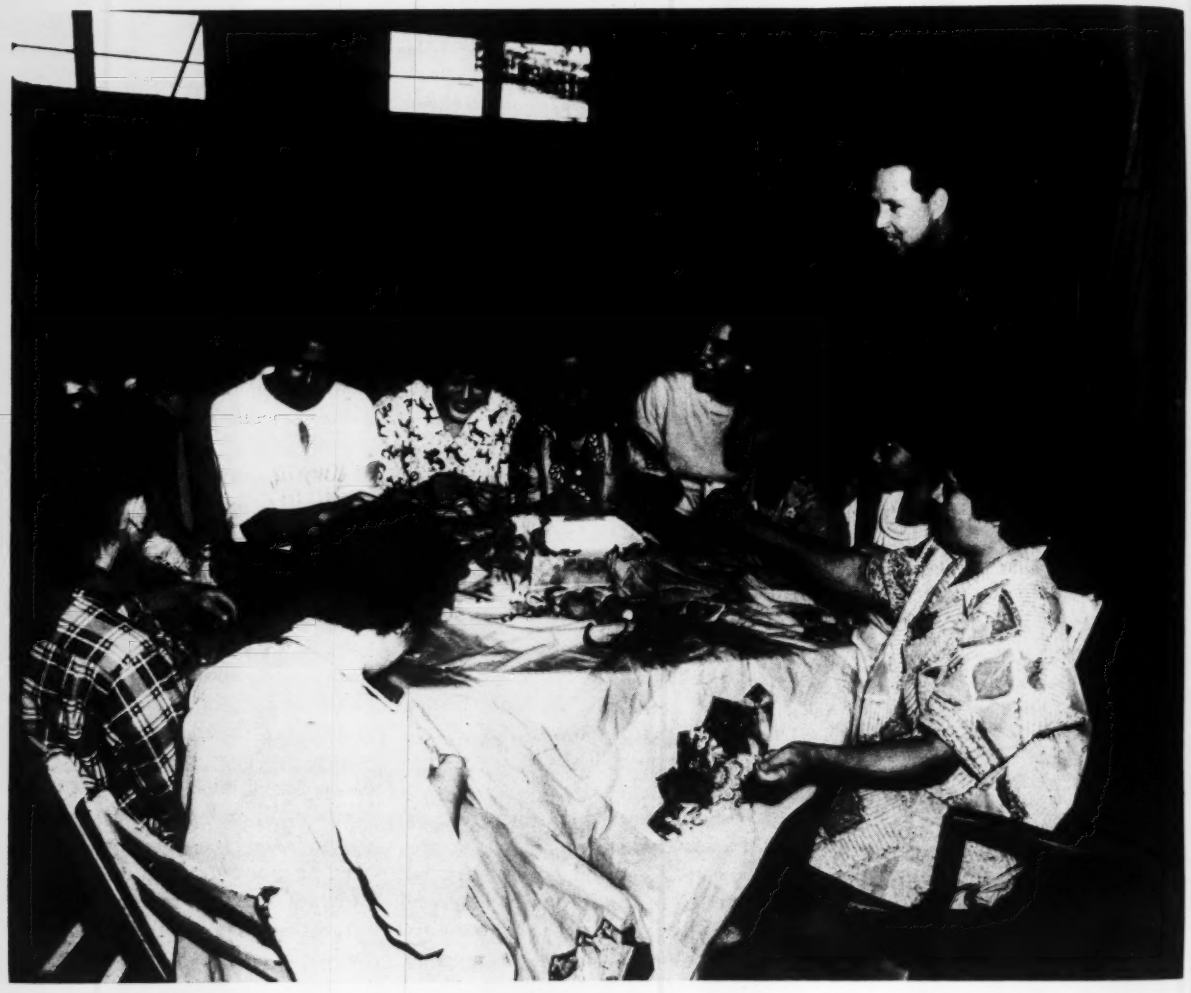
We, who like to lay claim to modernity and enlightenment in our present administration of police departments—and encourage the appelation "profession" as properly descriptive of our vocation as police officers—are particularly subject to this challenge of insufficiency. It is inescapable that the police must accept a major responsibility for the lamentable lack of progress in the reduction of crime. Other professions contributing to the release of mankind from the depths of disease, ignorance, oppression and want, have achieved a goodly measure of progress in the recent course of history. With crime as generally prevalent today as any time in many years past, the police can hardly pretend to comparable success in their calling.

While recognizing the role of other social institutions in the approach to this problem, we must be reconciled to the fact from the very outset that it is for the police to assume a major share of this burden of responsibility to prevent and reduce criminality. Until such time as we are able to develop, in concert with other agencies, workable solutions to problems of crime prevention based upon more idealistic and long-term approaches, the police must strive by direct and forceful means to hold the criminal tide in check.

Every experienced police administrator has already delved through enough authoritative material on the subject of delinquency causation and crime prevention to be secure in this thesis, at least—that crime has no single cause or cure. It is curiously the case, however, that a number of otherwise responsible and enlightened persons in subscribing to this worthy premise, appear to accept as fact that any preventive approach capable of being reduced to the outlines of a simple and singular concept must necessarily be regarded as ineffective. This observation does not allude nearly so much to police administrators (who must, of necessity, be of a practical turn of mind) as to certain of our contemporaries in related fields upon whom the requirement for hard-headed realism is not quite so directly thrust. We who are interested in furthering the cause of crime prevention, must concern ourselves with these associates in this common endeavor, whose ultimate purposes coincide with ours but whose professional views are not conditioned by the challenge of self-preservation and survival in the "asphalt jungles" of our modern civilization. For these associates of ours, whom we have permitted to define for us our problems and upon whose occasionally nebulous views and indeterminate recommendations we rely, have yet to produce a tangible program suitable for the practical utilization of police resources across the nation.

Inasmuch as the police have (well defined within their own areas of activity) certain duties and responsibilities to fulfill, it does not seem impertinent to suggest that, pending the development of a program effectively and wisely utilizing the police potential in crime prevention, at least some interim self-recognition by the police of their own direction and basic purpose is called for.

Initially, we must reduce to simple forms our police approach to problems of crime prevention. At the beginning, we must keep clear of the confusion and entanglements certain to be encountered in simultaneously attacking every sociologically conceivable cause of crime. Ours is a herculean task indeed, but we should not undertake to extirpate the hydra-headed serpent of crime before we have acquired a herculean



The programs of the Police Activities League are many and varied.

competence. We, as police, cannot attempt to go to every source of crime causation and nip the evil buds that otherwise may blossom into crime. It would hardly be appropriate or wise for the police to undertake alone, at any rate, any of the tasks of crime prevention which are too remote from general police practice and procedure.

Because of the primary role of the police in crime prevention, administrators should strive to achieve by their own processes every effective and practical solution to the problems involved. They should not feel constrained, necessarily, to subscribe to methods and principles laid down by authorities in fields somewhat removed in purpose and responsibility. Some of these authorities writing upon subjects pertaining to crime prevention may very well be influenced and motivated by considerations not fully in accord with police purposes and obligations; indeed, some may actually be completely out of sympathy with the police because of acts which must be performed in the pursuance of official duties.

It must be recognized that there have been produced, especially in recent years, a number of works on police subjects by qualified authors which are of such excellence as to preclude any question of their acceptability. Their efforts have given us much that is sound and illuminating. Their opinions and recommendations, largely derived from personal experience and observation of the best in police practice, deserve the most careful consideration and departmental adaptation. It seems to be generally the case, however, that police administrators skim over this never too abundant material so pertinent and valuable to their purposes. They extract for their own benefit little, if any, of the often excellent substance offered by these authorities.

There are several reasons apparently accounting for this administrative failure. The administrators' own lack of time and opportunity to study authoritative works and particularly to actually apply to their own situation the theories, strategy, tactics and solutions offered, plague most of these busy officials. The resistance to adoption of unfamiliar practices, so often manifested by the

As a crime prevention expedient, Chief Liu founded and is President of the Police Activities League. It provides a whole series of programs for young people, from athletics to cooking and sewing.

personnel of their departments, although vexing and halting to progress, is understandable. Unfortunately, the human desire for ease and security creates opposition to change and experimentation which presupposes risk and demands exercise of the thought processes.

If any truly significant reduction in our crime potential is eventually to be achieved through practical prevention, a thorough scrutiny of every facet of crime opportunity and encouragement must first be made. Crime breeds crime. This states as succinctly as possible the vital importance of controlling, eradicating and discouraging crime of the immediate moment—all crime. An environment wherein crime of any nature whatsoever is committed with frequency and regularity, and with apparent success, inevitably must provide the potential criminal with some encouragement, if not actual opportunity.

Crime begets crime; and if prevention is our purpose, then certainly we must strive to diminish the existing crime rate to an irreducible minimum. We must render impotent, at least, this one significant source of delinquency. Here is one area where the police indisputably reign sovereign—where the role of the police in the prevention of criminality and delinquency must be recognized and acknowledged. Police are in business to enforce the law. What is more natural to expect, then, that, in the process of perfecting that enforcement, we may also be furthering the discouragement and prevention of delinquency?

Here, at least, we have a practical premise upon which to base a claim of police effectiveness in crime prevention. Counter-claims will, of course, be made to the effect that punishment of the criminal serves no constructive purpose insofar as the individual criminal is concerned and provides no deterrent to potential criminals—perhaps not punishment per se. But effective repression of crime by the police can be claimed to contribute to the educational processes of the pre-delinquent and to others predisposed to anti-social behavior. As all of us are expected

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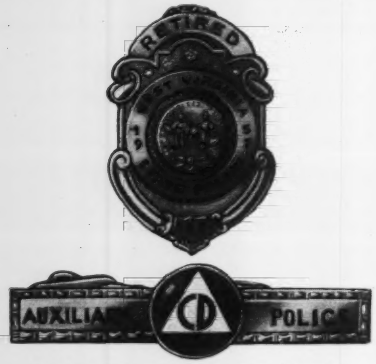

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to learn by example—as children learn by imitation; as everyone, in varying degrees, profits by experience and observation—so must it be recognized that some material value in point of example must derive prevention-wise from the swift apprehension and adequate punishment of criminal persons.

If we are to accept the premise that effective police enforcement in itself contributes to the discouragement and prevention of crime, then we must look to the continuation and improvement of that effectiveness. By the logic that police accomplishments in enforcement are constructive in a prevention sense, then just as certainly any liabilities imposed upon the police must affect the quality of the by-product. And what unfortunate influences are most likely to reduce the potency and quality of police endeavor? What must police administrators fear above all else as subversive of good police purpose, demoralizing of spirit and resolve, and ruinous of integrity? Again, crime! Crime, indirect and insidious—powerful enough to drag all but those of the most unassailable and sturdiest character into the muck and mire of political connivance and the evil of official corruption. Here again, arising to forestall by every means its own prevention and repression, is the age-old specter of crime itself. This time it reveals its identity in a new area and with another purpose. Since it cannot feed upon itself, it now finds nourishment to grow and prosper in the fat, engulfing folds of corruption. Crime, the evil fetus ever aborning within society and ever nourished by the dark placenta of civic corruption! Will society ever be aborted of this draining monster?

In order to survive and wax fat, criminals have throughout history found it expedient and profitable to implant themselves within the political framework of governments—local, state and national. Only the most naive and gullible will attempt to brush aside as beyond credence this unfortunate fact. This is not to say that such is already the case in your city or state, or in mine. We need not, however, look too far beyond the confines of our municipalities to see elsewhere clear evidence of such conditions. It does not require too discerning and experienced an eye, and not too sensitive a nose, to detect the signs. Enough of a revelation can be expected at any rate as to impart to those interested in community betterment and civic integrity, an overwhelming repugnance and fierce determination that a similar state of corrupt affairs will never obtain at home.

It is not so important at first to admit the probability or degree of political and civic corruption through criminal sources, as it is to recognize and scrutinize the mere possibilities of such eventuality. With recognition that criminal elements can and will, if permitted, infiltrate themselves within the very vitals of our communities, the assurance of our security then becomes merely a matter of integrity, principle, technique and procedure. Let us examine some part of the possibilities.

We may say that it is fairly safe and reasonable to assume that the vast preponderance of those aspiring to political office or the retention of same are not of a character to knowing or wilfully accept criminal contributions to their campaign coffers. We may similarly assume that there are some who, not aware of the source, will use such funds and support in achieving political victory. It is but a step from here to the "enlightenment" of the political tyro and to acknowledgment and repayment of debt to shady contributors. Such repayment all too often, of course, must take its toll at the expense of the citizenry and of civic integrity. We need to say little of politicians who knowingly accept obligating assistance of any nature whatsoever from criminal sources. Such politicians, injuring sorely their well-intended political brethren and constituents, often are so completely denuded of the fiber of honesty that, if they are not actually criminals, they are so constituted in character as to be virtually indistinguishable from criminals themselves.

Contributions from criminals and their ilk are not made for nothing. The impact of political repayment following such contributions is first and most keenly felt by the police. Thereafter the picture becomes quite clear—and tragic. Criminal intrusion upon politics . . . criminal-political infringement upon police . . . criminal-political-police betrayal of the citizen, who is the ultimate victim. Clearly enough, with unprincipled persons wielding political and other influences over the police and with police careers hanging in the balance, it is not surprising that some officers will succumb to such pressures and even assuage their consciences and fatten lean wallets with the proceeds from graft.

Now the criminal has achieved his purpose, establishing a new security and insuring for himself an ever-increasing prosperity. The vicious cir-

American Society for Criminology Holds Annual Conference

The annual Conference of the *American Society for Criminology* was held January 31 and February 1, 1958 at Los Angeles on the campus of the University of Southern California.

Following the meeting of the Executive Committee on the first day, a public forum on the subject of "Public vs. Police" paneled by President John P. Kenney (Chairman), James Fulton, Inspector from the Los Angeles Police Department (Police), Mrs. Hideo Kodani, Member National Commission on Community Organization, National Conference of Christians and Jews (Public), Omar Garrison, Science Editor, *Mirror News* (Press) and Samuel Haig Jameson, Consultant and Assistant Treasurer, California Taxpayers' Association (Psychological Factors) drew a large-sized public attendance.

"Research" was the theme of the formal presentations made on the following morning by Professor Arthur H. Sherry, Project Director, American Bar Foundation, who spoke on "Administration of Criminal Justice Survey," and Dr. Marcel Frym, Criminological Consultant, Hacker Psychiatric Clinic and Arbitrator, International Society of Criminology, who spoke on "Comparative Criminological Research."

At the regular business meeting homage was paid the late Dr. Douglas Kelley, former president of the Society.

Expressing a need for comprehensive study of academic programs in police and correctional fields, the Society authorized the Executive Committee to seek a grant to undertake such a study as soon as possible.

Officers elected for the coming year are:

President—John P. Kenney, University of Southern California
Western Vice President—Clyde B. Vedder, University of Arizona
Central Vice President—Richard A. Myren, Indiana University
Southern Vice President—Vernon Fox, Florida State University
Member-at-Large—Marcel Frym, Hacker Psychiatric Foundation, Beverly Hills
Secretary-Treasurer—William Dienstein, Fresno State College

The Society was honored by the presence of John D. Holstrom, President, International Association of Chiefs of Police, who contributed to the success of the Conference.

The Conference closed with a banquet highlighted by the address of Henry Reining, Jr., President, American Society for Public Administration who spoke on "A Responsible Professional Organization."

The American Society for Criminology is organized to coordinate education and research in the police and correctional fields and composed of persons engaged in teaching, research, and administration in these fields. The Society invites all persons dedicated to improvement of the police and correctional fields to apply for membership to Professor William Dienstein, Secretary-Treasurer, American Society for Criminology, Fresno State College, Fresno, California.

OFFICERS

Upper Photo: Left to right: Marcel Frym, John P. Kenney, William Dienstein, Clyde B. Vedder, Albert C. Germann, Jr. Lower Photo: Dr. Marcel Frym speaking before the annual Conference. Second from right foreground, Chief John D. Holstrom, new President of the International Association of Chiefs of Police.

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cle begins anew as greater and more certain revenues from illicit profits are obtained, leading to stronger support for those in office who make those profits and civic degradation the extent of their official contribution towards "crime prevention." Spasmodic and sporadic reforms throughout the years serve only to lull the citizenry into a false sense of security and belief that crime, rather than reform, is the occasional outcropping.

The conclusion is obvious. Crime prevention in any material sense cannot be realized without an efficient and effective police department. Effectiveness of police operations is impossible under pressure of partisan politics and criminal influences. Such pressures and influences are unavoidable if crime has established itself in the political, economic, civic and social life of the community. Manifestly, the element here to be removed to insure the wholesomeness of the remainder is the one of crime. Eliminate crime, and its evil ramifications are destroyed at the source. The purpose and the duty of the police under the circumstances become quite simple and quite clear. It is basically the performing of the primary function that justifies the existence of police in the first place —the elimination of crime, all crime, today. Perform this primary function well, and the most practical and realistic contribution to the prevention of future crime will have been made. ★★★

How to Beat the Rap

By Walter A. Lunden

EDITOR'S NOTE: *The author is Professor of Sociology in the Department of Economics and Sociology, Iowa State College, Ames, Iowa. What he has to say concerning the loop-holes in criminal justice administration will strike a familiar note for many police officers and detectives, who after hard and intelligent work along the investigative road have too often seen the criminal offender returned promptly to the opportunities of freedom again and again. There will be those who may not agree with Professor Lunden's estimates concerning those who "beat the rap" while in police custody because it was the first offense or because the suspect was an informant. The Oregon report to which he refers may be vulnerable because the sources for the raw data on which this report is based might to a considerable degree represent the opinions and memory of individuals rather than the solid statistical record.*

But assuming the estimates in this respect are approximately correct, the overwhelming percentage of those who successfully evade the penalty for their crimes during the judicial process and at the threshold of prison—and this is a matter of statistical record—is cause for real concern. The port of rehabilitation is safe from effective attack by its critics but a more healthy balance between the interests of the community and the interests of the individual, is called for. The survey of criminal justice administration in the United States now being conducted by the American Bar Foundation of the American Bar Association will undoubtedly result in appropriate recommendations concerning some of the soft spots in the matrix of criminal justice.

IN spite of the zealous efforts of the bench and bar to convict the guilty and to acquit the innocent, there are many ways by which the unprincipled person may defeat the ends of justice. The unscrupulous man who knows his way around can beat the rap. As yet there is no best seller on "How to Win Favor and Avoid Punishment," but such a book might rate two or three stars on the book market.

Address: Professor Walter A. Lunden, Department of Economics and Sociology, Iowa State College, Ames, Iowa.

Before analyzing the specific details of beating the rap, it may be well to mention two basic principles in criminal procedure which are related to the prosecution of a case. In a court case, it is assumed that each person concerned shall "tell the truth, the whole truth and nothing but the truth," etc. This is implied in the oath, but if a defendant does not elect to follow the assumption, i.e., tell the truth, he may not do so. If the untruth is accepted, he may beat a rap.

The other consideration lies in the area of criminal responsibility. Unless a person can be held responsible for his acts, he should not be punished for them. This concept applies to certain sanity cases, but it has been carried beyond in felony trials. Not a little of the contemporary thinking in the field of responsibility is based on the theory of limited responsibility. Clarence Darrow in 1924, as an attorney for the defense, gave voice to the theory that ultimately society is to blame for what a man does. The individual is but the creature or the end product of his environment, which molds and makes him.

Basically, therefore, the individual cannot be held responsible for his actions. This may be considered an extreme view, but many people accept the theory and shrug off their anti-social acts.

IN THE HANDS OF THE POLICE

In order to examine the various methods of beating the rap, a composite felony case may be followed through the different steps from the hands of the police, through the court and finally to the prison. The possible contingencies which may arise in the entire process and the possible outs have been arranged on the schematic flow chart.

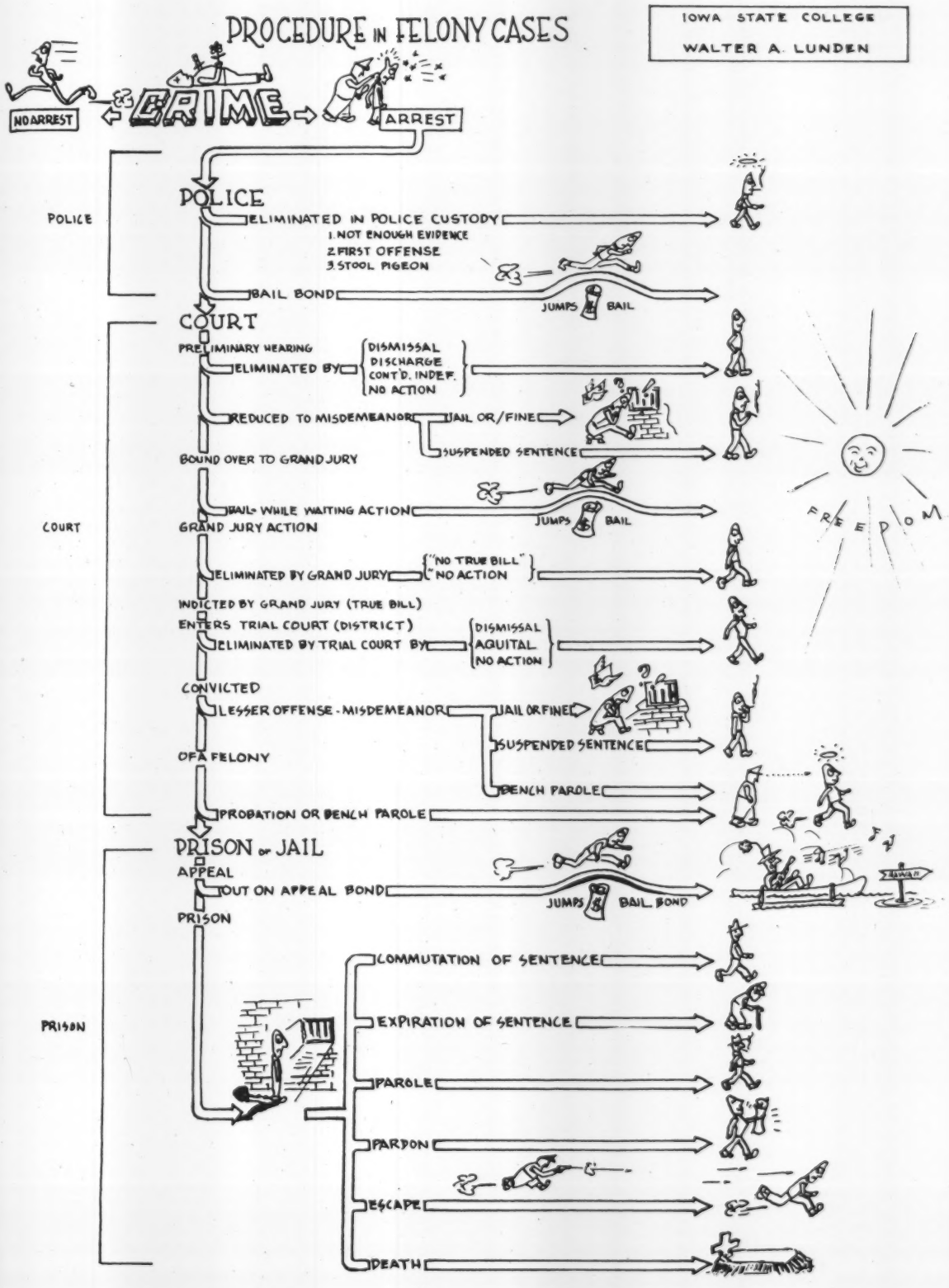
The first step in evading the law is to avoid arrest after the crime. Complete data are not available, but the F.B.I. did report in 1955 that out of every 100 crimes known to the police, only 28.4 were cleared by an arrest. In other words, there were no arrests in 71.6 per cent of the cases.[1] Due consideration must be given to the fact that one person may commit several crimes, but if no arrest is made in two-thirds of the crimes known to the police, somebody is avoiding arrest. It is true that arrests are higher for crimes against persons (78.5 per cent) than for crimes against property (25.4 per cent) but property crimes comprise 94.2 per cent of all offenses reported.

Suppose the person has been apprehended, what is the next step in beating the rap? After the police have taken the arrestee into custody, it is possible that no one may appear against him at the hearing, or there may be no evidence available. In some cases it may be a first offense, or the offender may be a stool pigeon. As a result of any of these conditions the arrestee walks out in the clear. Just how many cases are eliminated while in police custody by these means cannot be stated accurately because complete records are lacking, but in Oregon in 1927-28, about 8 per cent of the 1,771 felony cases were eliminated at this stage.[2]

If the arrestee is not cleared and required to wait preliminary hearing, he may be held in jail or allowed his freedom on bail. While out on bail bond, the arrestee may jump bond and disappear. There is no record available to show how many persons jump bail, but it can and has been done.

BEATING THE RAP IN COURT

The next phase of the proceedings fall into the area of the court. A de-


PROCEDURE IN FELONY CASES
IOWA STATE COLLEGE
WALTER A. LUNDEN
NO ARREST
CRIME
ARREST
POLICE
POLICE
ELIMINATED IN POLICE CUSTODY
1. NOT ENOUGH EVIDENCE
2. FIRST OFFENSE
3. STOOL PIGEON
BAIL BOND
JUMPS BAIL
COURT
PRELIMINARY HEARING
ELIMINATED BY
DISMISSAL
DISCHARGE
CONT'D. INDEF.
NO ACTION
REDUCED TO MISDEMEANOR
JAIL OR/FINE
SUSPENDED SENTENCE
BOUND OVER TO GRAND JURY
BAIL- WHILE WAITING ACTION
JUMPS BAIL
COURT
GRAND JURY ACTION
ELIMINATED BY GRAND JURY
"NO TRUE BILL"
"NO ACTION
INDICTED BY GRAND JURY (TRUE BILL)
ENTERS TRIAL COURT (DISTRICT)
ELIMINATED BY TRIAL COURT BY
DISMISSAL
AQUITAL
NO ACTION
CONVICTED
LESSER OFFENSE - MISDEMEANOR
JAIL OR FINE
SUSPENDED SENTENCE
OF A FELONY
BENCH PAROLE
PROBATION OR BENCH PAROLE
FREEDOM
PRISON or JAIL
APPEAL
OUT ON APPEAL BOND
JUMPS BAIL BOND
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PARDON
ESCAPE
DEATH

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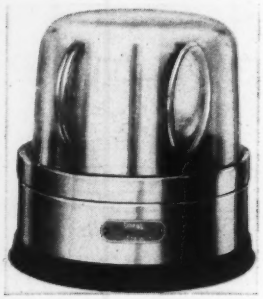

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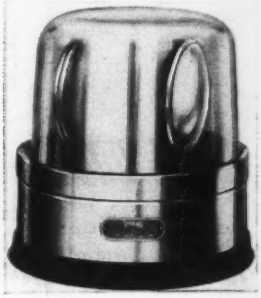

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fendant may avoid the rap if the case is dismissed, discharged, acquitted, continued indefinitely or no action taken. In 1932, of the total 22,337 defendants arraigned in New York State, 51.89 per cent were eliminated at this stage by one or more of these methods.[3] In Oregon in 1927-28, 46 per cent of the felony cases were eliminated at this juncture. Continuation of a case does not mean elimination, but the end result is just that. If, however, the case is not discharged or dismissed, the felony charge may be reduced to a misdemeanor in an effort to save time and money, or the prosecuting attorney may strike a bargain with the accused. In Oregon in 1927-28, of the 1,771 felony charges, 23 per cent were reduced to a misdemeanor in the preliminary hearing. In such cases, the defendant may be fined or jailed or both, or given a suspended sentence. The end result of the bargain to reduce a felony charge to a misdemeanor means that the seriousness of the rap has been softened considerably.

If any of the above contingencies do not occur, the case may be bound over to the Grand Jury. In New York State in 1932, 48 per cent of the total cases were held for the Grand Jury; and in Oregon, 37.9 per cent were handled the same way. This procedure may open another escape hatch because the defendant may be allowed his freedom on a bond pending action of the Grand Jury. If he elects, he may jump bail and beat the rap.

After the case has reached the Grand Jury, other contingencies may arise. There may be No Bill, or No Action. In 1932 in New York State, 21.5 per cent of the cases before the Grand Jury terminated in No Bill of Indictment, and only 59.1 per cent with a True Bill for the offense as charged. In Oregon, of the total cases reaching the Grand Jury (823 out of 1,771) 17.6 per cent resulted in No Action or No True Bill, with 82.4 per cent receiving a felony indictment. In a few cases, a Grand Jury may indict a defendant on a lesser offense.

After the indictment, what eventualities may occur in the trial court? Initially the defendant appears before the court for arraignment and plea. A demurrer or motion to quash the indictment may be entered because of some defects in the Grand Jury procedure. If there is an error, the case is dropped. In a few cases, the defendant may by abatement or limitation, object to the jurisdiction of the court. In addition, the prosecution may *nolle proseque* the case because of lack of evidence, or the state may not wish to proceed further.

If none of these contingencies occur, the issues are joined, and the trial runs its course. In 1955, the Municipal Court of Philadelphia established guilt in 61 per cent of the 2,207 criminal cases, but did not in 39 per cent. Of the latter group

(856 cases) the court failed to establish guilt because of the following conditions: 273 *nolle prossed*, 123 dismissed on demurrer, 370 acquitted by court and 90 acquitted by jury.

What about the 61 per cent (1,351) in which guilt was established? Of these, 597 pleaded guilty (25 to a lesser offense), 148 were found guilty by the jury (16 on a lesser charge) and 593 found guilty by the court (50 on a lesser charge) and 13 entered a plea of *nolo contendere* (an implied admission of guilt but not a confession to the indictment). Of the group, 7 per cent were found guilty of a lesser offense. Of those found guilty as charged (1,336), the court ordered fines or other money payments in 21.4 per cent of the cases, suspended sentences in 13 per cent, probation in 38 per cent and imprisonment in 28 per cent of the cases. Of the imprisoned persons, only 2.1 per cent went to the penitentiary.[4] In the writer's study of 95,939 criminal cases in the district courts of Iowa from 1935 to 1956, 59 per cent terminated in jail and fine sentences, 16.3 per cent in imprisonment, 2.2 per cent in bench parole, 2.8 per cent in suspended sentences, 2 per cent in acquittal and 17.7 per cent in dismissal.[5] There were more dismissals and acquittals than imprisonments.

If the defendant has been convicted and sentenced, there still remains another method to beat the rap. He may enter an appeal to a higher court and obtain his freedom on an appeal bond, pending the answer to the appeal. With proper funds and connections, he may flee the country and evade the law. If this does not occur and the sentence is confirmed by the higher court, conditions are still not too bad. There are other methods open.

THE TERMS OF IMPRISONMENT

Once the offender has been sentenced to prison, he does not stay long. At some time in the future all get out in one way or another, and in many cases the actual sentences are not severe. Of the 45,171 inmates released from state prisons in 1951, only 10 per cent had served more than five years before release. One-third of the embezzlers, one-fourth of those convicted of aggravated assault and one-fifth of the auto thieves and forgerers served less than one year.[6] The median time in prison for all those released was 21 months or less than two years. The median time for robbers was 33 months, for burglars 22 months and rapists 35 months.

Inmates get out of prison by one of the six methods as shown on the flow chart. In 1951, of 67,382 inmates discharged from state prisons, 34,402 got out on some type of conditional release (32,936 by parole), whereas 24,561 got out on unconditional release, 22,064 by expiration of sentence, 178 by pardon and 2,319 by commutation of sentence. A few, 668, received St. Peter's Parole, i.e., died in prison, whereas 105 were executed. Apart from these, 2,799 escaped and 4,847 were discharged by court order or other methods.[6]

There are no statistics on how many men beat the rap each year, but it now appears that the number is far more than most people assume. It is to be regretted that in a land where the law presumes a man to be innocent until proved guilty, the unscrupulous offender has so many means at his disposal to circumvent the legal order. However, this may be the price that is paid as long as men follow the dictum that it is better for two guilty men to go free than for one innocent man to be punished. The law presumes that every man shall be given his due reward, but the instrumentalities of justice can be no better than the men who employ them.

WHAT SPEED IS SAFE?

There is much misunderstanding about what is a safe speed to drive on the highway. Most drivers are not qualified to drive over 40 to 50 miles per hour on dry roads. This may sound like a radical statement but we are convinced that it is true. An increase in speed from around 50 miles per hour on the average to around 58 miles per hour in the State of Iowa has been accompanied by an increase of about 25 per cent fatalities. Some drivers can possibly drive at this rate but it takes extreme caution and good judgment to do so. At least 95 per cent of drivers should keep their speed down well around 50 miles per hour if they expect to stay out of serious accidents.

The trouble usually comes at emergency points when a driver attempts to pass at a dangerous place, or move through stop lights or stop signs at too high a rate. These practices cause him to spend more time on the wrong side of the road, every second of which is dangerous.

Another item that should be considered is following distance. According to some state laws it is permissible to follow at a distance twice the car length for each 10 miles per hour of speed. This is extremely dangerous at speeds 40 to 60 miles per hour. The reason is that the stopping distance increases as the square of the speed. Laws should be changed which are worded so as to encourage rather than discourage hazardous practices. . . . *Driving Research Laboratory, Iowa State College, Ames, Iowa.*

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★★★

The Mobility of State Prison Wardens*

By Walter A. Lunden

EDITOR'S NOTE: *The author is Professor of Sociology in the Department of Economics and Sociology, Iowa State College, Ames, Iowa. A prolific researcher in the social sciences with special reference to the administration of criminal justice, he is a regular contributor to the journals. In this article dealing with the mortality rate of the executive heads of state prisons in the United States, Professor Lunden has brought into sharp focus a problem that is of critical interest to both the police and correctional administration.*

THE warden of a state prison or reformatory is a key figure in the correctional system in our nation. Regardless of how we look at the many problems in modern penology, we are keenly aware that no system is any better than the men who direct institutions or execute the programs of a unit of government. It is a truism often forgotten that the leaders and the men who are in command positions today are there because, in one form or another, society has selected or screened them for the positions they hold. In other words, each society or state creates the kind of leaders it desires. When a society selects capable leaders good results naturally follow. Conversely, if or when less capable men are placed into important positions, less desirable results are obtained.

Among the areas of research in penology the solitary figure of the American state prison warden is one which needs careful study. Because of our peculiar historical development there are few leaders today who hold as much social responsibility and authority in their hands as the prison warden. The ship captain at sea appears to be the only civil post which holds a comparable position of status and control over the lives of other men. A warden is an executive but he is a very singular type, with command responsibilities for men who do not want to be governed. He deals with men who have denied government and who have been housed under conditions of antagonism with a minimum of cooperation and consideration for others. No other executive plays such a role.

The present investigation was concerned with some of the basic social aspects of the wardens of prisons and reformatories in the United States. Who are these men, from where do they come, how are they selected, how long do they hold office and what factors terminate their duties? Also what about the problems of occupational mortality, turn-over, length of tenure and how are these in turn related to the questions of political patronage or to bureaucracy?

In presenting the findings of this research we do not want to presume any definitive or final end results. We merely propose two things; to present a more complete understanding of certain aspects of the American prison warden as an executive and secondly some of the present situations which confront the men who will be the wardens of tomorrow.

Over the years the American Correctional Association has been concerned with what has been called the "professional aspects" or the "career phase" of correctional work. In 1939 Mr. Sanford Bates posed a question at the 69th Annual Congress of the American Prison Association in New York which gave rise to the present research. At that meeting Mr. Bates said:

"I venture to state that not a single warden in the country today conscientiously and deliberately, in advance, adopted the prison business as his life work and set himself to the task of training for it."

In 1955, we approached the Research and Planning Committee of the American Correctional Association with a proposal to examine certain aspects of American prison wardens. After due consideration, Dr. Peter Lejin and his committee gave approval to the plan and we set to work. The Industrial Science Research Institute of Iowa State College provided the necessary funds in conducting the work. The area of the investigation was limited to the wardens of 100 state prisons and reformatories for male offenders in the forty-eight states. There were six states which did not supply information for the investigation. They were Georgia, Tennessee, Louisiana, Texas, Utah and Washington.

Based upon the survey findings, the average turnover rate for all prisons for the fifty year period (1906-1955) was 17.8 per 100 prisons or wardenships. In other words in any given year 17.8 per cent of the prisons changed wardens. In raw figures this means that on the average ten wardens were appointed in ten out of the 59 prisons. In terms of fractions about one-sixth of the prisons appointed a new warden each year.

In the fifty years from 1906 to 1955, the annual rate of turnover in wardenships has varied from the lowest of 3.4 in 1930 to the highest of 35.6 per cent in 1935. (See the charts for the rates.) From 1910 to 1923, the turnover rates were relatively high and above the fifty year average. From 1926 to 1930, rates decreased with the lowest rate of 3.4 in 1930. During part of the Great Depression from 1931 to 1939 rates advanced and remained above the average. In the decade of the 40's and during

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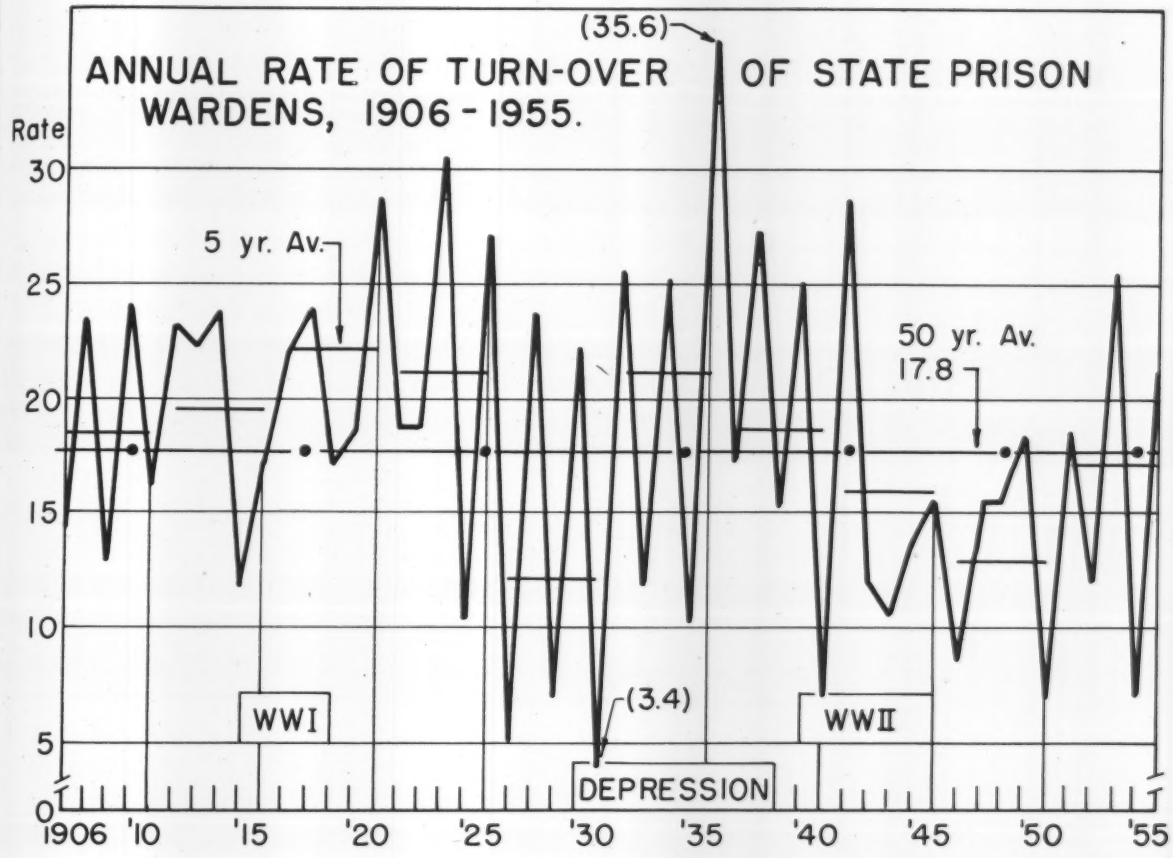
* Excerpt from a study, *The Selection and Mobility of State Prison Wardens,* conducted by Professor Lunden, and released in August, 1957.



World War II, rates fell considerably below the average. In the past five years, from 1951, rates have increased again, reaching 25.4 in 1953.

Turnover in State Prisons by Five Year Periods, 1906 to 1955*

Years	Changes		Per Cent
	Total	Average	Turnover
1906-10	48	9.7	18.3
1911-15	57	11.4	19.5
1916-20	65	13.0	22.0
1921-25	62	12.4	21.0
1926-30	36	7.2	12.2
1931-35	64	12.8	21.6
1936-40	54	10.8	18.3
1941-45	47	9.4	15.9
1946-50	38	7.6	12.9
1951-55	50	10.0	17.0
Total	521	10.4	17.8

* These data cover the appointments of 521 wardens in 59 state prisons who had completed their duties by 1955. A turnover rate or percentage is a figure determined by finding the number of wardens appointed in a given year for a definite number of prisons compared to prisons where no change had been made. As an example, 5 wardens were appointed in one year among 50 prisons and no changes were made in the other 45 prisons. The turnover or change, therefore, was 10 per cent.

From the chart it is evident that there is a tendency for rates of turnover to be high in the odd numbered years and lower in the even numbered years. This is especially true for the years 1923 through 1941. Whether these variations every two years are related to the changes of administration (i.e., politics) cannot be stated with certainty, but there does appear to be some relationship.

In order to further clarify the turnover rates, the data have been combined by five-year periods with the total number of changes, the average and the per cent of turnover.

Turnover rates were high in the five years 1916 to 1920 with a rate of 22.0 and were low in the two periods of 1926-30 (12.2) and 1946-50 with a rate of 12.9 per cent.

Two significant facts emerge from the analysis; the average length of time the wardens have been in office was 5.2 years and the annual average turnover rate amounted to 17.8 per 100 wardenships. Whether the tenure is too short and the turnover rate too high cannot be stated here. However, in most well organized institutions long tenure and low rates of turnover are related to continuity and stability. Too short tenure and too rapid changes at the top causes breaks in the administration of a prison. ★★★

Senate Committee on the Judiciary Rejects Plan for Legal Distribution of Narcotics to Drug Addicts

By C. Aubrey Gasque

EDITOR'S NOTE: *Mr. Gasque is General Counsel for the Committee on the Judiciary of the United States Senate. By Senate Resolution 67, adopted in 1955, the United States Senate authorized the first nation-wide investigation of the illicit narcotics traffic. The investigation was undertaken by a Subcommittee of the Senate Committee on the Judiciary and was completed during 1956. The findings of the Committee would seem to set at rest any plans for the legal distribution of narcotics to drug addicts. Excerpts from the Committee's report follow and will prove of significant interest to the American police.*

WHILE there are fewer drug addicts in the Nation today than there were before the Harrison Narcotic Act was passed and before the Federal Bureau of Narcotics was created in 1930, the figure of at least 60,000 addicts today is more than the number reported by any other western nation. The Subcommittee stated that in spite of the best efforts of Federal agencies with present personnel and procedures, smuggling of illicit narcotics has not been halted. The traffic now costs over $500 million per year, to say nothing of the human lives shortened or destroyed.

Drug addiction and the illicit narcotics traffic, moreover, are responsible for approximately 50 per cent of the total crimes committed in the large metropolitan areas and 25 per cent of all reported crimes in the Nation. Drug addiction is contagious. Addicts, who are not hospitalized or confined, spread the habit with cancerous rapidity to their families and associates. Yet, less than 20 per cent are confined. It is inevitable that this contagious problem will increase from year to year unless drug addicts are exposed to an effective treatment and rehabilitation program, and unless those who fail to respond to treatment are placed in quarantine type confinement or isolation.

Address: Professor V. A. Leonard, P. O. Box 837, College Station, Pullman, Washington.

With this problem in mind, the Subcommittee of the Senate Committee on the Judiciary invited the Nation's foremost authorities on drug addiction to attend special hearings held in New York devoted exclusively to an intensive examination of methods and facilities for treating and rehabilitating narcotic addicts.

The greater part of the New York hearing was devoted to testimony for and against the recent proposals that the Federal Government establish a chain of "narcotic clinics" across the Nation where drug addicts could obtain "shots" at little or no cost on a sustaining basis.

While the "clinic plan" embodies six major recommendations, the crux of the plan centers on its proposal to set up all over the country a system of dispensary clinics where drug addicts could obtain narcotics free or at a very nominal charge. Provisions would be made for registration, fingerprinting, and photographing to identify the addicts.

Clinics would be staffed with doctors, employment counsellors, psychiatrists, and others whose task would be to attempt to rehabilitate the addict and to help him find suitable employment. In the course of efforts at rehabilitation, the addict would continue getting a minimum supply of drugs. Eventually, attempts would be made to withdraw drugs gradually. However, if the addict fails to respond to the psychiatric treatment and other rehabilitation efforts of the clinic, he would be given "stabilizing" or "maintenance" doses of narcotic drugs for the rest of his life.

Based on the testimony received during our special hearings in New York and on a mass of other evidence adduced during the investigation, the Subcommittee declared the so-called clinic plan for legal distribution of narcotics is totally unworkable, completely contrary to accepted medical practice and would aggravate rather than solve the problem of drug addiction. The Committee made the following recommendations:

1. ADDICTS MUST BE HOSPITALIZED, IN AN ATMOSPHERE FREE OF NARCOTIC DRUGS, OR TREATMENT WILL FAIL

Under the provisions of the proposed "clinic plan," the drug addict would be given drugs free, or sold drugs at a minimum cost, for the continued support of his addiction. This would be without hospitalization or other confinement. Thus, not only would the drug addict have available his regular supply of drugs at the clinic, but he would have access to additional drugs on the illicit market.

The Surgeon General of the United States, Dr. Leonard A. Scheele, spoke for the overwhelming majority of the medical profession, when he testified:

Treatment of drug addiction must take place in a drug-free environment, in an institution with special facilities for gradual withdrawal of the addicting drug. . . . Our experi-

ence leads us to believe that the vast majority of addicts cannot be withdrawn from narcotics with hope for success without institutional treatment.

2. AMBULATORY TREATMENT, WHERE A SUPPLY OF NARCOTICS IS EITHER HANDED TO THE DRUG ADDICT OR WHERE HE MUST COME TO THE CLINIC FOR "SHOTS," IS TOTALLY UNSATISFACTORY

There are only two alternatives in the proposed plan to treat drug addiction on an ambulatory basis: Either the drug addict must be given a supply of narcotic drugs to take with him and administer himself as he desires, or, he must be required to report to the "clinic" several times a day to have the "shots" personally administered by medical personnel. Physicians ruled out either procedure as absolutely impractical and were in accord with the longstanding policy of the American Medical Association, that:

". . . any method of treatment for narcotic drug addiction, whether private, institutional, official, or governmental, which permits the addicted person to dose himself with the habit-forming narcotic drugs placed in his hands for self-administration, is an unsatisfactory treatment of addiction, begets deception, extends the abuse of habit-forming narcotic drugs, and causes an increase in crime."

3. THE PLAN FAILS TO CONSIDER THE "TOLERANCE" FACTOR, WHICH CAUSES THE ADDICT TO DEMAND EVER-INCREASING DOSES OF NARCOTICS DRUGS

Medical authorities agree that the drug addict is dominated by the phenomenon of increasing "tolerance." In other words, his daily intake of drugs cannot be "stabilized" or "minimized," but must constantly be increased if he is to obtain an effect equivalent to his first "shot." For this reason, physicians and law enforcement officials appearing before the subcommittee repeatedly warned that drug addicts could not and would not be satisfied with a minimum dose of narcotics as envisaged in the clinic proposal. They testified that under the clinic plan it would be necessary to provide the chronic addict with an ever-increasing supply of drugs. Otherwise, the drug addict would turn to illicit sources of supply.

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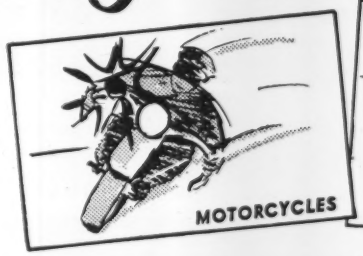

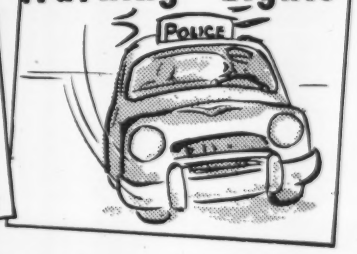

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4. THE ILLICIT MARKET WOULD NOT BE ELIMINATED, AS THE TOLERANCE FACTOR WOULD DRIVE THE ADDICT TO SUPPLEMENT HIS "CLINIC" SUPPLY FROM PEDDLERS

The advocates of the clinic plan strongly urge that it would eliminate the illicit narcotics traffic in the United States. The overwhelming majority of physicians and law-enforcement officers appearing before the subcommittee disagreed. Mr. Malcolm Wilkey, United States district attorney for the Southern District of Texas, summed up the problem this way:

"You will not cut the smuggler and the peddler out because the ration these people get at the clinic must in some way be limited. It cannot be unlimited. If it is limited, these people will go to the free clinic and get their maximum supply, and they then will go out on the black market and supplement their requirements by illegal purchases. You will still have illegal traffic to supplement the amount that can be obtained at the clinic."

Dr. G. H. Stevenson, director, drug addiction research, Department of Psychiatry, University of British Columbia, Vancouver, Canada, appearing at the special invitation of the subcommittee, testified that in his opinion legalized drugs might even increase black-market sales:

"Unless drugs were to be given to the addicts in unlimited quantities to satisfy their wants rather than any need they might have, they would get their surplus from the black market the same as they do now, and people who were going to start in to drugs, the same as young people get started in drugs now, they could not

get it in a legal market, would still get it from the black market. . . . I think the black market would welcome legal sale as a means of increasing their own market."

5. THE LEGALIZED DISTRIBUTION OF FREE DRUGS WOULD CREATE NEW ADDICTS AND INCREASE THE NARCOTIC PROBLEM IN THE UNITED STATES

The stated aim of the proponents of the "clinic plan" is to eradicate narcotic addiction. However, this suggestion that the "clinic plan" would be helpful in reducing narcotic addiction has been met with the vehement opposition of many of the Nation's acknowledged experts on the treatment of drug addiction. Three of these, Dr. Victor Vogel, Dr. Harris Isbell, and Dr. Kenneth Chapman, all with firsthand experience treating thousands of drug addicts at Lexington and Forth Worth, wrote earlier:

"The proponents of this plan believe that addiction is incurable or that treatment is inhumane and that if addicts are given the minimum amounts of drugs necessary to maintain their addiction lawlessness attendant on contraband traffic in narcotic drugs would be eliminated. This reasoning is unrealistic, as has been shown by several attempts in this country and abroad that have failed."

6. SUCCESSFUL REHABILITATION OF DRUG ADDICTS CANNOT BE ACCOMPLISHED UNDER THE "CLINIC" PLAN

While existing treatment programs insist upon confining the addict in the drug-free environment of a hospital for withdrawal of the drug prior to any efforts to rehabilitate him in the community, the "clinic" proposals call for keeping the addict on drugs while trying to rehabilitate him.

7. REHABILITATION WILL FAIL IF THE ADDICT IS STILL USING DRUGS

The Subcommittee found from the overwhelming weight of authority in the field, that social rehabilitation of the addict cannot succeed while he is using narcotic drugs due, in large measure, to the effect of the drug upon the individual. Testifying on this point, Dr. Robert H. Felix, Director, National Institute of Mental Health, emphasized that:

". . . it would be much more difficult to rehabilitate a person on narcotics than off. . . . Because the addict, when he is on drugs, has certainly retreated from the province of reality. I feel from what I have seen over the years that this would be doomed to failure."

Dr. Stevenson told the Subcommittee that, in his opinion, an individual under the influence of drugs was not a good subject for social guidance or psychiatric treatment, because:

"When a person has drugs in his system, drugs are the only thing he is interested in; that is the only thing he wants. It solves all his problems, it removes his ambition, and reduces his inhibitions and moral tendencies . . . they are not as good people physically and mentally and socially when they are on drugs as when they are off drugs.

"They need increasing amounts; their mind is completely preoccupied with getting drugs when they are on drugs, and their work is, in my opinion, never of as good quality when they are using drugs as when they are not using drugs.

"The drug is an intoxicant, and it seems to me it is foolish to think that a person who is intoxicated, even in a mild degree, is as capable a person or as well adjusted a person as a person who is free from an intoxication."

8. "CLINICS" WOULD MAINTAIN DRUG ADDICTION, AS THE ADDICT WHO FAILED TO RESPOND TO REHABILITATION WOULD BE GIVEN "SUSTAINING" DOSES FOR LIFE

The "clinic" plan provides that the drug addict who fails to respond to rehabilitation efforts should be given on a permanent basis so-called "sustaining" or "maintenance" doses of narcotic drugs. This proposal for thus maintaining narcotic addiction has met with the vigorous and virtually unanimous disapproval of the medical profession. Dr. James V. Lowry, Medical Director, Public Health Service Hospital, Lexington, Ky., emphasizing that the drug addict should be treated and not kept in a state of narcotic semisomnolence, testified:

"I think my function as a physician is to treat people, not to maintain them in a state of disease, and I think in administering narcotic drugs to a person, we cannot forget what happens to that person. I am more interested in treating the basic condition of the individual, to restore him to health."

9. THE "CLINIC" PROPOSAL WOULD NECESSITATE UNITED STATES WITHDRAWAL FROM INTERNATIONAL TREATIES, AS WELL AS MAJOR CHANGES IN FEDERAL AND STATE LAWS

Commissioner Harry J. Anslinger of the Federal Bureau of Narcotics testified that the adoption of the "clinic plan" would not only undermine enforcement and spread addiction, but would also be in absolute contradiction to responsibilities and obligations assumed by the United States in international treaties. It would, moreover, be contrary to our present leading role on the United Nations Commission on Narcotics Drugs which is designed to curb narcotic addiction and to prevent the international traffic in narcotic drugs.

10. EXPERIMENTS WITH SIMILAR "NARCOTIC CLINICS" IN THE 1920'S SHOWED THEIR ABJECT FAILURE

The Subcommittee gave extensive study to the experience with somewhat similar narcotic clinics which were established on an experimental basis in the early twenties in some forty-four cities in the United States, and concluded that the clinics, as they operated at that time, were little more than "filling stations" for drug addicts, with little if any emphasis on treatment and ultimate rehabilitation. ★★★

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Crime and Psychiatry

By John M. Macdonald, M.D.

EDITOR'S NOTE: *Dr. Macdonald is Assistant Professor of Psychiatry at the University of Colorado Medical Center; Assistant Medical Director of the Colorado Psychopathic Hospital in Denver and Consulting Psychiatrist to the District Courts of Colorado. He is the author of the book* PSYCHIATRY AND THE CRIMINAL, *recently published by Charles C Thomas, Publisher. During his time in Denver, Dr. Macdonald has examined over three hundred criminal offenders at the request of the Courts of that State. One of his most recent notable cases will be remembered by all readers of the* JOURNAL—*the Graham Case in Denver in which a young man planted dynamite on an airliner and then took out insurance on his mother, a passenger, with the result that his mother and 44 passengers were killed instantly . . . and he went to the gas chamber.*

In the following article written exclusively for POLICE, *Dr. Macdonald traces in clearly understandable terms the contributions psychiatry can make toward the solution of the police problems of crime and delinquency and toward a more effective administration of criminal justice.*

THE psychiatrist enjoys a somewhat unenviable reputation today. Some people view him with skepticism and question sharply his scientific knowledge while others have magical expectations of his ability not only to treat mental disorder in the individual patient, but also on a grander scale, to treat or rather reduce the incidence of the maladies that plague our civilization—alcoholism, suicide and criminality. It is timely to review critically the modest contributions that psychiatry has to offer in the field of criminology.

The present shortage of psychiatrists is a major handicap which limits the help which can be provided for the criminal. Understaffed, overcrowded mental hospitals and outpatient clinics with long waiting lists are the rule and not the exception. Relatively few physicians are interested in forensic psychiatry and those few who are interested usually confine themselves largely to providing diagnostic services for the criminal courts. A heavy burden arises from the increased use of the plea of not guilty by reason of insanity, the greater demand for pre-sentence psychiatric study and the numerous examinations of sex offenders required under sex psychopath laws.

The diagnostic evaluation of the criminal is of particular importance. The detection of the insane offender, the elucidation of the origins of the criminal behavior and the determination of a satisfactory plan of rehabilitation are the usual aims of the physician who conducts the examination. Diagnostic study is seldom confined to interviews with the defendant but includes interviews with members of the family, the employer and other persons who may be in a position to contribute significant information.

The criminal act is studied in the light of the offender's personal history, parental upbringing and general life circumstances. The victim is seldom interviewed which is unfortunate, as sometimes the victim contributes in large part to his own unfortunate fate. In the crime of murder, the criminal may have no knowledge of his victim, but more frequently the criminal and his victim are either related to one another or have had a long acquaintance. It is perhaps distressing that statistically, one stands a much greater risk of being murdered by a member of one's own family than by a stranger. There are many cases on record where there is clear evidence that the victim by continued brutality, alcoholic excesses, or other provocative behavior, contributed in large measure to his own demise. The confidence game criminal selects as his victim someone with larceny in his soul. Complaining victims in rape cases have sometimes acted in a provocative manner likely to bring them into difficulty.

The parents sometimes play a major role in contributing to delinquency in their children as in the following case.

A twenty-year old man charged with check forgery was referred for psychiatric examination by the court. Despite his youth he had already spent four years in jail and he had a long history of criminal behavior. At the initial interview he expressed considerable remorse because he had failed his widowed mother who had done so much to keep him out of trouble. His mother, who accompanied him to the hospital, became very tearful and implored the physician's help. She said she would do anything that was humanly possible to help change her son's behavior.

Further interviews, however, disclosed that the mother, despite her protestations of concern, was actively encouraging her son's wayward behavior. She had always spoiled him and never denied him anything. Whenever he was apprehended by the police she would become very distressed, but she would never reprimand him in any way and her only complaint to him would be that he should have told her about the crime following its commission.

She never failed to pay his court fines for him and she would always cover his bad checks rather than let him accept responsibility for his actions. On occasion she would even lie in an attempt to save him from imprisonment. Much to his embarrassment, she would embrace

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him and kiss him in public. She complained that her son was cold and indifferent toward her except when he was in trouble. Her pathetic need for her son's affection was such that she would go to any lengths to obtain it. Despite her expressed desire for psychiatric treatment for her son, she effectively sabotaged every effort that was made to help him.

For a detailed review of the origins of criminal behavior the reader is referred to the author's book, *Psychiatry and the Criminal.*[1] Recognition of the factors underlying the criminal behavior of the defendant is of prime importance in formulating a plan of rehabilitation. While many offenders suffer from mental abnormality it is seldom possible to provide adequate psychiatric treatment because of the shortage of psychiatrists and of suitable treatment facilities.

The failure of repeated terms of imprisonment to effect rehabilitation of the recidivist criminal has led to the introduction of special penal institutions where custody is combined with group methods of psychiatric treatment. The California Medical Facility differs from the usual prison in that special emphasis is given to the investigation of psychological mechanisms underlying adverse attitudes and conduct. The Patuxent Institution in Maryland also has as its aim the treatment and rehabilitation of convicted offenders. The prisoner is confined and treated under an indeterminate sentence, and is released only when his "emotional unbalance" is so relieved as to make it reasonably safe for society to set him free. Thus the length of time that a man stays will be determined not so much by what crime was committed but by his readiness to rejoin society. These special institutions have a staff which includes psychiatrists and psychologists.

The increasing emphasis on higher standards and qualifications for entrance into police service has led to the introduction in some communities of psychiatric evaluation of applicants for police work. The psychiatric screening of police recruits has been well described by Dr. James H. Rankin in the July-August, 1957, issue of this journal.

The training of the police recruit should include elementary instruction in the dynamics of human behavior. The good policeman is often a shrewd amateur psychologist. His knowledge of human behavior is derived from his unique experience over the years with the criminal offender, supplemented by the informal guidance he receives from his senior colleagues. There is a need, however, for formal teaching which should commence when he first becomes a policeman. Skill in interviewing is of prime importance although it is seldom given the consideration it deserves. It is important to be aware of the varying reactions of persons to the anxiety imposed on them when interviewed by a law enforcement officer. They may react for example, with hostility even though they may be guiltless of any crime. A similar reaction on the part of the policeman may introduce needless difficulties. A belligerent attitude may have its origins in insecurity or an unsatisfactory relationship with the father and may be completely unrelated to the interview situation. Unruffled acceptance of provocative remarks far from adding fuel to the flames will often have the reverse effect. The need for privacy should need no emphasis but this elementary principle is often overlooked. The ability to pick up feelings and deal with them is particularly important. Different approaches are required depending on the personality of the subject being interviewed. Herein the psychiatrist can offer useful guidance.

Some police officers have an unwarranted faith in the efficacy of so called "truth serum" tests as a means of obtaining confessions from suspected criminals. Psychiatrists are often requested to administer truth serum for this purpose. The term suggests the existence of a drug with the remarkable property of eliciting the truth. The reputation enjoyed by truth serum is based on spectacular newspaper reports rather than on carefully documented case reports in professional medical or legal journals. The description truth serum is misleading as the drug used is not a serum and it does not always lead to the truth.

A barbiturate drug is injected slowly into a vein in order to induce a relaxed state of mind, in which the suspect becomes more talkative and has less emotional control. The mental state produced is not unlike that seen in drunkenness. It is well known that a person under the in-

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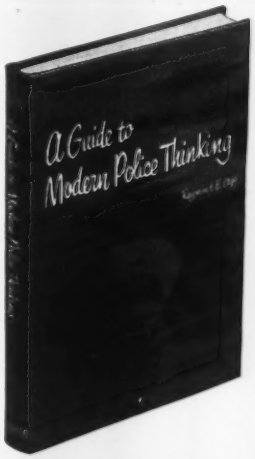

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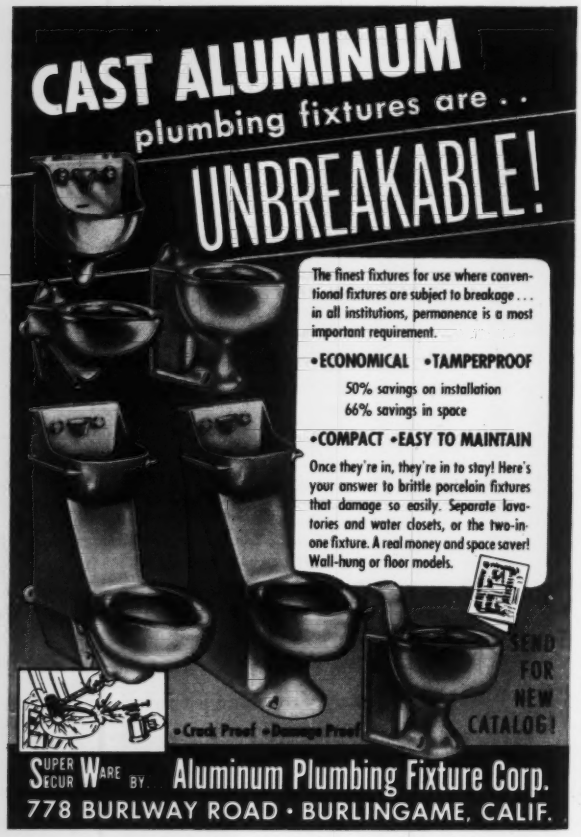
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fluence of alcohol may reveal information which he would not disclose when sober. While the intravenous injection of a drug by a physician in a hospital may appear more scientific than the drinking of large amounts of bourbon in a tavern, the end results displayed in the subject's speech may be no more reliable. The drugged person may be just as boastful and untruthful as the alcoholic.

The risk of self-incrimination is a potent force motivating the suspect against revealing information which might lead to his conviction on a criminal charge. It is unlikely that he will reveal information under drugs unless he is prepared to do so. The test is by no means reliable, and when used indiscriminately, it may cloud rather than clarify criminal investigation. Criminal suspects, while under the influence of a drug, may deliberately withhold information, persist in giving untruthful answers or falsely confess to crimes they have not committed.[2] Inbau who has had considerable experience in observing or participating in truth serum tests, is of the opinion that such tests are occasionally effective on persons who would have previously disclosed the truth anyway if they had been properly interrogated.[3] The test is of value in restoring memory in cases of genuine amnesia. Herein the police officer may find help from the psychiatrist.

A not infrequent problem facing a busy police department is the person who makes bizarre complaints or continually pesters the department with baseless accusations against his neighbors or work mates. It is important to distinguish between the harmless eccentric and the potentially dangerous person who suffers from paranoid delusions. Unfortunately it is not easy to formulate rules for distinguishing between these two groups. The manual *How to Recognize and Handle Abnormal People*, published by the National Association for Mental Health is perhaps the best available guide for the police officer.

It is not, however, always a simple matter to arrange for psychiatric examination of the person suspected of insanity as he may be unwilling to agree to this and there may not be sufficient information available to justify involuntary commitment to a psychiatric hospital for diagnostic study. Whenever a person has false ideas that people are plotting to kill or harm him the need for psychiatric assistance is imperative. The individual with persecutory delusions all too often feels justified in taking the law into his own hands when he fails to obtain the help he expects from the police.

In the last three years the writer has examined two patients who committed murder under these circumstances. A middle-aged woman had delusions that her husband was having sexual relations with their teenage daughter. The police department, on receipt of her complaint, arranged for physical examination of the daughter. The woman did not accept the results of the examination and later shot and killed her husband. A railway worker complained to a sheriff's office that officials of the railroad union were doping him. The complaint was recognized as being absurd but no attempt was made to obtain psychiatric examination and the man subsequently murdered one of his imagined persecutors.

The contributions of the psychiatrist in the field of criminology have been outlined. He is but one member of the team which has as its purpose the rehabilitation of the criminal. The rehabilitation team includes law enforcement officers, psychologists, sociologists, social workers, penologists, religious and voluntary organizations such as the Rotary Club, Big Brother, etc. The role of the law enforcement officer in rehabilitation should be of paramount importance and it is well that he should be aware of the strength and limitations of the various sources to which he can turn for help.

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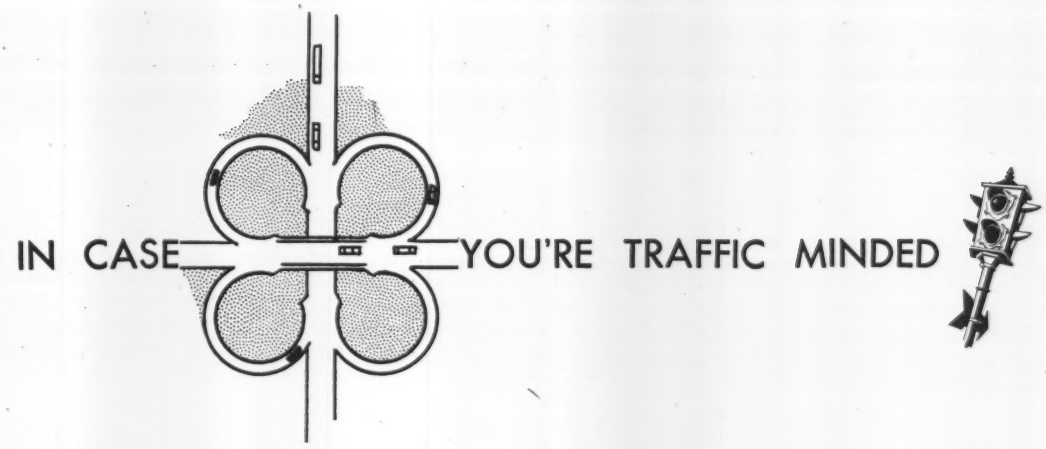
Worth Remembering

True success is not when others recognize you, but when you recognize yourself.



Motor Vehicle Safety in the Age of Speed and Power

A Biomechanical Approach

By Jacob Kulowski, M.D.

EDITOR'S NOTE: *This is the first of a series of two articles written exclusively for* POLICE *by Dr. Kulowski dealing with the biomechanical approach to motor vehicle safety. The material is admittedly technical in nature. The author states, "It is not easy reading but I have done the best I could within the limits of my own understanding of this most complex problem." Dr. Kulowski needs to make no apologies. Police problems tend to become more technical and involved in direct proportion to the extent to which they are understood. There are no easy solutions to the problems that confront the police; they are all complex and the answers are not simple.*

Dr. Kulowski graduated from the University of Buffalo Medical College in 1925, with internships and residencies at the Buffalo City Hospital 1925-28, followed by general practice in Buffalo. He did his orthopaedic training at Children's Hospital, State University of Iowa and held the rank of Associate Professor of Orthopaedic Surgery 1932-34. He engaged in orthopaedic practice in St. Joseph, Missouri 1934-42 and then served with the Navy 1942-46, including two years at sea in the South Pacific campaigns. This was followed by service as Chief Surgeon at Carrie Tingley Hospital at Hot Springs, New Mexico, and lecturer at the Medical College of Evangelists in Los Angeles, when he returned to practice at St. Joseph in 1947. Dr. Kulowski is the author of CRASH INJURIES, *being published by Charles C Thomas, Publisher.*

A BIOMECHANICAL consideration of motor vehicle safety in this age of speed and power must be broad enough to apply equally to both static and dynamic aspects of the problem. First of all it must apply to rider-vehicle combinations at the curb, the static or still-life aspects. Secondly, it must apply to conditions underway at variable speeds under normal and abnormal situations; i.e., the dynamic or time, space, motion, and emotional* phase. Stated briefly, a biomechanical analysis equates both human and inanimate physical variables without giving preeminence to one or dissociating one from the other. It is, therefore, an objective integrated point of view.

It is the purpose of this article to show that a biomechanical approach to motor vehicle safety can be useful to improve rider-vehicle combinations. The recurring theme of it may be stated in the question: What are the biomechanical defects operating to generate greater-than-chance accidents and injuries; and, what methods of control are available to reduce their frequency and degree? At the risk of laboring the obvious, several engineering concepts will be related by analogy to the human body.

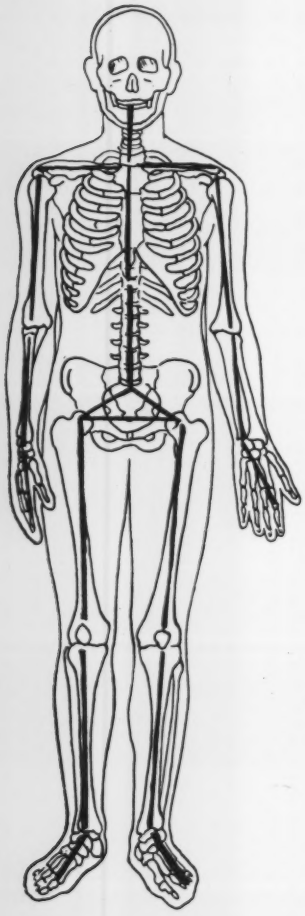
Basically, these have to do with margins or factors of safety, both of which have fairly well defined limits. First, the complex anatomy and physiology of the various body segments will be reduced to mechanical linkages or bars. Secondly, physical defects—for example, congenital or acquired conditions—which interfere with or modify the hinge actions of this system or weaken any part of it will be evaluated, by analogy, to so-called "stress-raisers" in engineering jargon.

SYSTEM OF HUMAN BODY LINKAGES

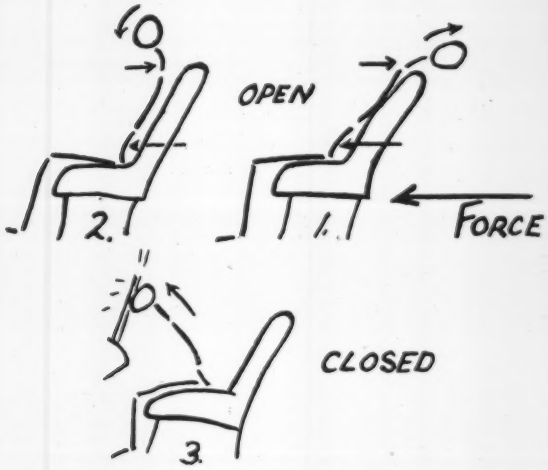
From the engineering point of view the human body can be considered as a linkage mechanism with all the

Address: Dr. Jacob Kulowski, 2915 Francis, St. Joseph, Missouri.

* Emotional or motivating factors are too complex to be tackled in this article which aims instead at simplicity through mechanical analogies.



The Link-Man, after Wilfred T. Dempster: Annals of the New York Academy of Sciences, 63:559, *1955, pp. 561. The system of body links has been superimposed upon the normal skeleton.*



Mechanism of whiplashing: 1 and 2 show reactions to rear-end collision force; i.e., the open kinetic chain reaction. Number 3 represents the closed kinetic chain reaction due to head contact with windshield.

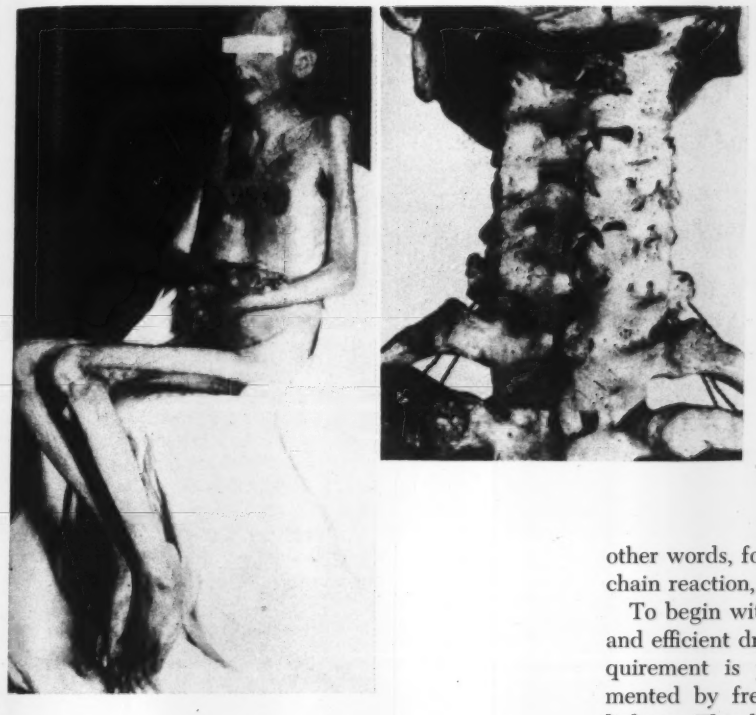
link bars pivoted at the joints. All links, with the exception of the spinal column, can be considered as rigid bars from joint to joint. The spinal column may be visualized as a flexible member. However, the individual vertebral segments may be reduced to three principal links (or otherwise if desirable), i.e., cervical (neck), lumbar (low back), and dorsal (upper back). The dorsal link is stiffer than the other two due to the attachment of the thoracic cage (ribs) to it. For this reason sprains are rare in this region; and occur commonly in the neck and low back areas. More of this later.

In the link man the major pivots appear at the hip joints which region is referred to as the atheltic hinge. Its significance has been stressed by Hooton who called it the pelvic wheel; a phrase delightfully applicable to motor vehicle safety. Since the keystone of the driver-vehicle-highway combination, in this respect, is the seated rider the importance of these pivots may be anticipated.

The greater versatility of human linkages, as compared with those of machinery, needs to be properly understood. With regard to machinery the linkages are almost always closed or pivoted at each end. Thus the results are produced in a predetermined manner and in no other. This is the so-called "closed kinetic chain." The same situation exists in the human body, but to a limited degree. This is illustrated best in the femoral linkage (thigh bone, knee joint and hip joint pivots) in the seated person. The kinetic chain is closed here when the feet are on the floor or applied to the brake or accelerator. In this kind of situation, also, injuries to this linkage are more or less predictable. The most common one results from knee-dash or similar sort of impact during crash deceleration.

However, regarding the extremities as a whole and the head, these linkages form what are called "open kinetic chains." This allows greater freedom of action (such as throwing a ball, etc.). By the same token such movements as reaching for a control, etc., have greater meaning in a spatial sense or internal automotive environmental standpoint. Moreover, flailing reactions of these linkages during crash decelerations may be highly indeterminate. By contrast the heavily loaded body mass reacts differently under such conditions; especially when it is restrained by a safety belt and harness. At the same time it must be obvious that the extremities cannot be directly restrained, but must be given freedom to act. The belt and harness must be designed to permit this.

The most classic open chain injury results from whiplashing. The head is most commonly whipped from rear-end collisions. The victim most frequently is in the for-



Frozen seated figure just prior to autopsy. Joint stiffness due to arthritis of many years duration. Picture to right shows condition of the cervical spine. Courtesy of the Armed Forces Museum of Pathology, Washington, D. C. (Gilmore and Stecher, Military Medicine, 117:432, *1955).*

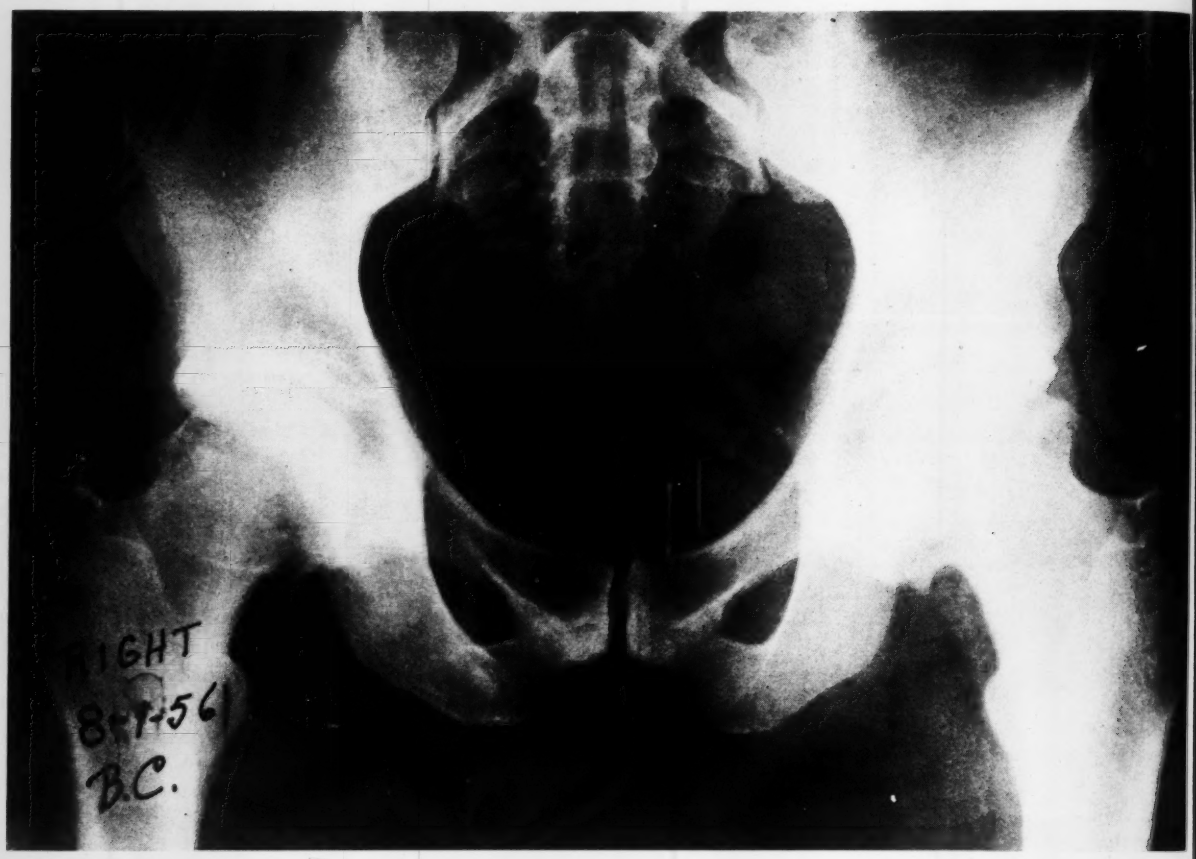
ward vehicle. The opposite is not infrequently observed to be the case clinically by the physician. But even in this type of mechanism, the body versatility crops up. Whenever there is contact between the head or shoulders with cabin structure the closed kinetic chain mechanism operates. This may account for the more severe head and neck injuries received in some accidents. In a limited series of cases studied by the writer and based upon the patient's statements regarding their injuries to the neck or low back from crashes, approximately one third were open kinetic chain reactions; one third were closed; and, one third could not be thus identified.

BIOMECHANICAL "STRESS-RAISERS"

In regard to stress analysis of structural materials the term "stress-raisers" refers to non-uniform stress conditions produced by surface alterations on the member such as screw threads, notches and other defects in the materials themselves. Engineers are well aware that such stress-raisers tend to lower the margins of safety or limits of factors of safety. They should also become more aware of the fact that analogous stress-raisers exist in the human body. These, also, interfere with the factors of safety of human structures. The most common one in the motoring population, according to my own observations, is arthritis; which is especially prevalent in the spinal column. Even less understood is the fact that this structural defect may be operating all along the line, i.e., before accident, during accident, and after accident. In other words, for example, cervical arthritis may set up a chain reaction, or triple threat.

To begin with, visual activity is most essential to safe and efficient driving. A most important aspect of this requirement is peripheral vision; which must be augmented by free rotatory action of the cervical spinal linkage. This kind of vision is particularly activated at intersections, junctions, and interchanges; where rear-end and angular types of collisions are becoming increasingly more frequent. Certain types of cervical arthritis tend to restrict rotatory and other movements of this linkage. It is my impression, based on clinical studies, that drivers who are afflicted with cervical arthritis are more frequently involved in rear-end and angular collisions than normal drivers. By inference it seems that the greater frequency of these collisions is due to impaired peripheral visual activity. Here, indeed, is one signpost pleading for further study in the field of possible connections between physical defects of all kinds and greater-than-chance accident frequency. The relationship between stress-raisers and increased vulnerability to crash injury is more clear cut. This idea expresses a crash-impact engineering point of view, as it were, in reverse.

My clinical observations on chronic crash disabilities show that residual disabilities of the neck and low back rank all other body linkages in this category of crash casualties. Among these people the most prevalent biomechanical stress-raiser is arthritis. In many this defect apparently antedated the accident. This means that the accident was superimposed upon an already deficient spine. Since the action of the spine may be compared to that of a curved spring, much of its tolerance to external forces depends upon its intrinsic resilience which exists between the intervertebral discs and intervertebral ligaments. The predominant result of spinal arthritis is loss of resilience or flexibility. On account of this effect the spinal column is thus made more susceptible to injury of mechanical origin. The connection between previously



Early post-traumatic arthritis of the hips about five years after knee-dash impact in severe automobile truck accident which caused bilateral dislocation of the hips; in young adult male.

existing stress-raisers and aggravation of the residual disability after injury is similarly acceptable.

In my experience clinically, patients whose cervical and low back painful disabilities, which are most resistant to treatment after motor vehicles accidents, are usually those who had been afflicted with varying degrees of arthritis before their respective accidents. There is another category of arthritis which is apparently initiated by injury of mechanical origin—the so-called post-traumatic arthritis. The medicolegal implications of this statement are obvious, but need not concern us further in this discussion. However, it may be mentioned that in the latter class of patients it is not easy to identify this kind of arthritis as a post-traumatic variety which is related to the accident in question; or has merely become evident in the course of time as an unrelated disease entity. This is especially true of cases which were roughly classified in the first place, after injury, as "sprains"; without x-ray manifestions of skeletal injury (fracture or fracture dislocation).

(Editor's Note: Watch for the second article by Dr. Kulowski in the July-August issue.) ★★★

RATTLING CARS CAN CAUSE ACCIDENTS

Frederick J. Gassert, Jr., State Motor Vehicle Director of New Jersey, recently reported that a survey of 515 inspection station examiners indicated that automobile nuts, bolts and screws that work loose are a major cause of accidents. The majority of the examiners reported knowledge of such accidents, listing 1,262 crashes from this cause.

He pointed out that there are 800 "mating" parts on an average car and most of these rely on lock washers to prevent separation by vibration and strain. The examiners cited 50 brake accidents, 94 wheel accidents and no less than 166 accidents where the driver lost steering control, all due to fastener failures.

The American Association of Motor Vehicle Administrators has named a committee to study the over-all use of self-locking fasteners on automobiles to overcome this deficiency.

COSTLY

Every hour, says a recent report of the American Bar Association Traffic Court Committee, about $500,000 in property damage occurs through traffic accidents. It runs to nearly $5 billion a year in economic loss—apart from the tragic toll of deaths and injuries. The major causes are three, says the report: bad highways, bad vehicles, bad drivers.

Vision for Driving

Preliminary Report on a Survey by the American Optometric Association*

EDITOR'S NOTE: *More than one out of five of the licensed drivers in the United States may be unable, with or without glasses, to meet the minimum standards for safe vehicle operation set by safety authorities, according to the following pilot study of 3,000 persons in twenty-five states conducted by the American Optometric Association, Inc.*

"Dr. Wendell E. Bryan, Denver, Chairman of the AOA Committee on Motorists' Vision and Highway Safety, cautions against generalizing from the survey, but its results parallel the conditions generally found by optometrists and ophthalmologists in routine examination of the 75 million adults who visit us periodically for vision care," Dr. Lester H. Sugarman, Meriden, Conn., president of the Association, stated.

A broader study is now under way and the results of it and other related studies are expected to show that the percentage of vision failures contained in the report are close to those that will be found in any cross-section of drivers. Other chief findings of the pilot study are: 1) there is a geographical variation and relationship between driver visual efficiency, testing standards and safety education; and 2) there is probably no element of highway safety with a greater undeveloped potential for improvement than driver vision.

GOOD vision is an obvious requirement for safe driving, yet millions of drivers have uncorrected vision problems that make them highway hazards. Many are unaware of their handicaps until an accident occurs or they receive some type of eye test.

Fortunately, all but a minute fraction of all licensed drivers could, with the aid of modern science, have vision that is up to par. There is probably no element of highway safety with a greater undeveloped potential for improvement. The remedies are known, available and being applied, but not extensively enough.

In many states only casual eye tests have been made by driver license examiners. Insufficient funds have been available for driver licensing in general, and facilities for anything but a superficial eye-chart test have seldom been provided. Often there has been unjustified fear that large numbers of drivers might be denied licenses if more comprehensive tests were given. There is lack of faith in moderation and lack of information on the possibilities of correction of below-par vision. State laws on vision tests have been lax, and there has been little pressure of public opinion for progress beyond the first perfunctory eye tests of a generation ago.

A STUDY OF 3,000 DRIVERS

For these and other reasons, there has never been adequate information on the extent of vision problems among drivers. In 1957, a voluntary vision screening survey was launched by the American Optometric Association and its Woman's Auxiliary in cooperation with the Automotive Safety Foundation, the National Home Demonstration Council and other organizations. Its basic purpose was to find what percentage of licensed drivers fall below acceptable standards on the major visual requirements for safe driving.

Portable screening equipment was set up in scores of communities in twenty-five states. Drivers were invited to have their vision tested by standard techniques, without charge or obligation. The tests were administered by laymen, but supervised by licensed vision specialists. Almost all non-technical details were handled by women's organizations—members of the Woman's Auxiliary of the American Optometric Association, National Home Demonstration Council, and the Women's Division of the Automotive Safety Foundation. Both men and women drivers were tested, and in about the same proportions as licenses are held by male and female drivers.

ELEMENTS OF SAFE VISION

While much technical terminology is used in describing vision problems and vision tests, anyone capable of driving can understand the visual requirements for safe driving. The results of the tests and the principles of correction of the common shortcomings are just as readily understood. The tests in the survey dealt with these essential visual "skills":

Acuity—ability to focus and see clearly with each eye separately and both eyes together, particularly at a distance of many feet or yards. This is essential for seeing danger, reading road signs in time, and for general adaptation to the critical driving environment. It is essential but only a small part of the total visual requirement. The tests were under carefully controlled conditions for as much uniformity as possible. It is the only "skill" tested in the conventional Snellen letter-chart test used by most driver license examiners, and usually the tests are under such varying conditions of light, cleanliness of test-charts, etc., that even this, the only usual test, is far from adequate.

Depth perception—ability to judge space and distance. For most drivers this depends on good binocular (two-eyed) vision, because space and distance are determined by the brain in relating the image from one eye to the image from the other at the slightly different angle that results from the separation of the two eyes. Depth perception is essential for judging whether a car can be passed safely or whether a driver has time and space to maneuver from one lane to another among fast-moving vehicles on a highway. The screening instruments used

* Courtesy of the American Optometric Association, 4030 Chouteau Ave., St. Louis, Mo.

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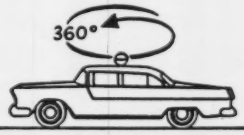

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in the survey tested both binocularity and space judgment—neither of which is covered adequately in the conventional eye test for driver licensing.

Field of vision—ability to see to the sides when focused straight ahead. This, of course, is essential to detect cross-road traffic, pedestrians at the side of the road, and for ease in watching interior and exterior rear-view mirrors and for an adequate grasp of the visual environment of driving. In most states no attempt is made to test this important safety requirement.

Muscle balance—the ability of the two eyes to point simultaneously and easily to the object to be seen. In many persons there is a tendency for at least one eye to point slightly upward or downward (vertical phorias) or to the right or left (lateral phorias). This interferes with good binocular vision and hampers acuity, depth perception and field of vision.

Good night vision is another important requirement, but tests for it are complex and the survey did not include glare resistance tests. Good night vision for driving depends on three abilities—resistance to being blinded by bright light; quick recovery after exposure to bright light; and ability to see under conditions of low illumination.

PILOT SURVEY RESULTS

Following are the percentages of drivers found to fall below acceptable standards on the major visual requirements tested in the AOA survey which at the stage of the preliminary report had covered 3,000 licensed drivers in twenty-five states:

Inadequate depth perception	22 per cent
Inadequate acuity	21 per cent
Lateral phorias	17 per cent
Vertical phorias	13 per cent
Inadequate field of vision	10 per cent

Dr. Wendell E. Bryan, Denver, Chairman of the AOA Committee on Motorists' Vision and Highway Safety, urges caution in generalizing from this pilot survey. However, a broader study is now under way, and the results of it and other related studies indicate that the percentages are close to those that will be found in any cross-section of drivers. It should be noted that drivers were tested with their driving glasses if they ordinarily wore glasses for driving, indicating that persons required to wear glasses for driving need periodic examinations also.

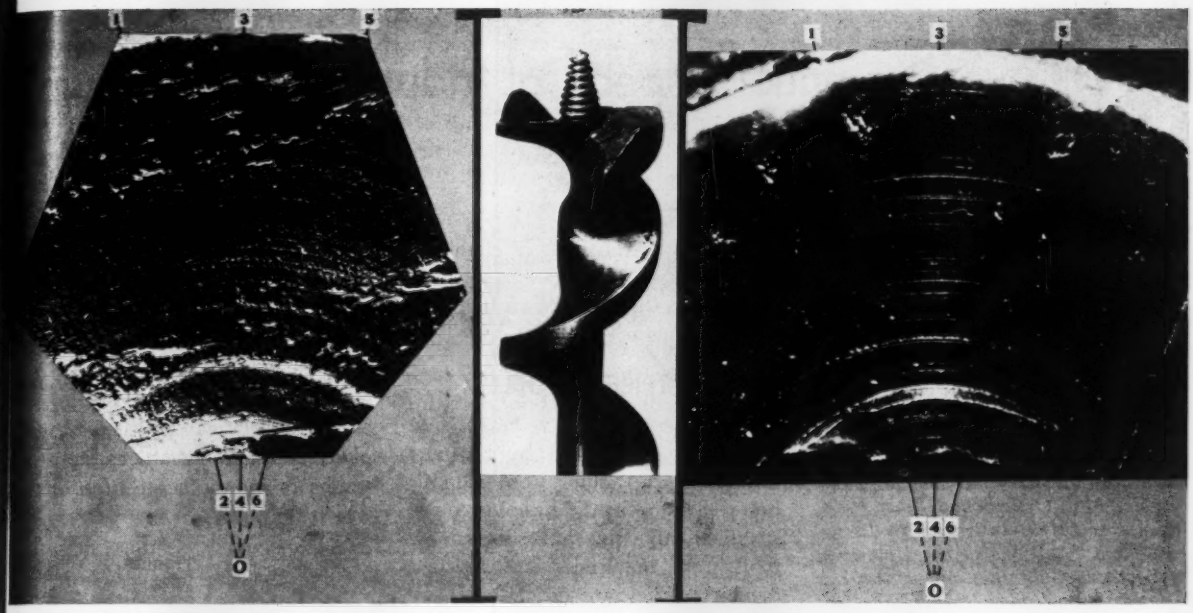
The conditions found in the pilot survey are also confirmed by routine examinations of the 75 million adults who visit optometrists and ophthalmologists periodically for visual care. Driving has become so common that the vision of the typical adult may be considered close to the vision of the typical driver.

While the pilot study cannot be relied on for precise information on geographical differences, it does indicate wide variation. Most notable is the high rating on visual efficiency of drivers in a state like California where there has long been emphasis on safety and vision as a safety factor. Some rural states, particularly in the Southeast, seem to show about twice as high a percentage of visual problems among drivers as in California. The assumption may be made that in some states, emphasis on safety and vision has caused drivers to obtain the vision care they need. Conditions can be improved, and are, where action programs are put into effect.

CORRECTABILITY

As to the correctability of the vision of those failing the tests, valuable studies have been made by Dr. H. W. Hofstetter, Director of the Division of Optometry, Indiana University. From studies of 332 clinic patients, he estimates that only 0.3 to 0.6 of 1 per cent of a large cross section cannot be corrected to meet the requirement on acuity (20/40 Snellen in the better eye). His report also shows that 96 per cent of the driving population can be corrected to 20/20 in the better eye.

Drivers with heterophoria can also be greatly assisted by proper professional care, and correction will greatly improve depth perception and field of vision. However, one of the important results of better vision testing and vision care should be to make drivers more conscious of their visual capacities. The driver who knows that he lacks adequate depth perception can compensate for his shortcoming by being especially cautious in situations where good depth perception is called for. He can learn to look to the side more frequently if he knows that he does not have the peripheral vision he should have. If



WHAT IS YOUR OPINION?

Three photographs are shown above. Center is a 1½" wood bit believed to have been used by safe burglars who drilled a section out of the roof of a supermarket to gain entry. Wood chips from the drill were found on the floor inside the market.

Two suspects were stopped by officers in an adjoining town later in the morning. One of many tools in their possession was the 1½" bit. Their collection of tools warranted an arrest for "possession of burglar's tools."

The rectangular photo shows an impression made in wax with the cutting edge to the left of the screw. Photographs of tool marks are to the same scale. Centers of both tool marks are indicated by the figures "O."

Now for your part in the comparison. Remove both photographs from the magazine. Cut out section "1-2-3-4" of the wood-chip photograph. Punch the centers "O" of both photos with a pin. Superimpose the cut-out photograph over the wax-impression photo and rotate about the common centers. Study lines, highlights and shadows, their positions, intensities and relationship one to another as you rotate the overlying photo.

Replace section 1-2-3-4 and remove section 3-4-5-6. Repeat the comparison. Remove both sections and study.

Was the mark on the wood chip made by the bit used to make the wax impression? Are you convinced beyond a reasonable doubt? What is your opinion? *(Courtesy of Lt. Walter R. Scott, San Diego Police Department.)*

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glare bothers him or if he is abnormally handicapped in low illumination, he may reduce his night driving or reduce his speed.

Doctor Bryan says that "vision is as personal as one's fingerprints"; no two eyes are alike, and even less are two pairs of eyes. The driver who cannot meet such minimum standards as used in the AOA survey should have a thorough examination adapted to his particular needs, and correction for his particular requirements. With the aid of the science and art of visual correction plus conscious adaptation to his capacities or lack of them he can do much to prevent himself from being a highway hazard.

AN ACTION PROGRAM

Individuals, communities and organizations seeking an action program for traffic safety may direct their activities toward these "vision for driving" goals:

1. Periodic re-examination of the vision of all drivers. Millions of drivers have had their licenses repeatedly renewed since the days when no eye tests were required for licensing; more millions who had an original test have never been tested again, in spite of the fact that aging is the greatest single contributor to poor vision.

2. Thorough vision examinations for accident repeaters.

3. More extensive use of licensed vision specialists as consultants to licensing examiners, traffic courts and other government agencies dealing with highway safety.

4. Adoption of minimum vision standards in the following skills:

A) Acuity in the better eye
B) Glare resistance
C) Adaptation to low illumination
D) Distance judgment
E) Breadth of field of view
F) Color vision

5. Dissemination of more information on the fact that drivers lack necessary visual skills without knowing it; and that almost all shortcomings can be corrected with proper vision care. Voluntary screening, voluntary correction and voluntary caution can bring immediate results that compulsory laws may never achieve.

For more details on the survey referred to and the joint program now underway, any of the following major participants may be consulted:

Motorists' Vision and Highway Safety Committee
American Optometric Association
4030 Chouteau Avenue
St. Louis 10, Missouri

Safety Division
The Woman's Auxiliary to the American Optometric Association
4013 Byers Avenue
Fort Worth 7, Texas

Women's Division
Automotive Safety Foundation
200 Ring Building
Washington 6, D.C.

Mrs. O. G. Rushing
Safety Chairman
National Home Demonstration Council
Shawnee, Oklahoma

★★★

Personnel Aspects of Industrial Plant Security

By B. W. Gocke

EDITOR'S NOTE: *Mr. Gocke received the M.A. degree in Police Administration at the University of California and was a member of the Police Department in Berkeley, California, from 1937 until 1945. Formerly Capt., Military Intelligence, U.S. Army, he was Advisor, Personnel Training, Division of Public Safety, U.S. Military Government for Germany, 1945-1948. In addition to his duties as Security Manager for Sears, Roebuck and Company, Los Angeles Mail Order Plant since 1948, he also serves as Instructor in Industrial Plant Protection at the University of Southern California and at the Los Angeles State College. Mr. Gocke is a contributor to the professional journals and the author of* POLICE SERGEANTS MANUAL, *originally published in 1944 and now in its fourth edition; and* PRACTICAL PLANT PROTECTION AND POLICING *published by Charles C Thomas, Publisher, in 1957.*

INDUSTRIAL plant security consists largely in preventing access to the premises by unauthorized persons and in controlling the individual actions of authorized personnel (employees, deliverymen, salesmen, vendors, visitors, etc.) so as to prevent or deter them from performing any act detrimental to themselves or to the welfare of the company.

In analyzing this statement, we see that a good plant protection organization not only prevents trespassing, but it controls the actions of those within the plant to such a degree that it eliminates or reduces the possibility of theft, accidents, careless fires, violation of company rules, or compromise of its trade secrets or of secret governmental projects in process.

Other, more passive aspects of plant protection, are the control of fire from plant processes, and the control of damage to the plant by lightning, flood, windstorm, etc. These are usually controlled by measures undertaken by management at the time the plant is constructed or in the light of changing conditions requiring permanent alterations in the physical structure of the buildings or grounds.

Address: Mr. B. W. Gocke, 12249 Riverside Drive, North Hollywood, California.

THE THEFT PROBLEM

Various estimates have been made of the losses suffered by business through theft, ranging from 500 million dollars on up.* These losses are sustained by the theft of money, tools, raw materials, and finished products. They are occurring every day of the week—by the misdeeds of new employees and by the so-called "old trusted employees." As a matter of fact, it is the trusted employee who is usually found to have committed the largest thefts and embezzlements. The trust which has been placed in him by management puts him in a unique position to carry out his thefts relatively easily over an extended period of time.

What are some of the measures that can be brought to bear on this problem? How can management protect the interests of the company from depredation by employees who are interested mainly in filling their pockets with loot at the expense and well-being of others?

PERSONNEL CONTROL

One of the most important phases of plant protection is that of the control of personnel. These people who work in the plant day after day are the ones to whom the most attention should be given. They are the people who have ready access to the premises. They are familiar with the physical set-up of the buildings and grounds. They know the procedures, the supervisors, and the guards. They know which things are important and valuable, and they know the soft spots in the organization. In short, they are in the best position to know not only the location of desirable information or articles of value, but also the best possible means of obtaining them. Moreover, as employees with daily access to the premises, they can proceed to make plans and take whatever steps are necessary for the acquisition of that which they want.

Screening New Personnel

It follows that one of the first and most important controls to be undertaken is that of properly screening the personnel.

During the 86th annual convention of the Congress of Corrections held in Los Angeles in August, 1956, the statement was made that approximately one out of seven of the nation's working population have criminal records which may exclude them from bonding and better jobs. If this statement be true, it points rather strikingly to the necessity for a discriminating selection of personnel for positions where confidence and trust are primary requisites.

The thoroughness and the degree of care taken in this screening process will naturally depend upon the degree of trust which management places upon the individual and upon the possibilities for wrongdoing in the particular job or area in which the person is to work. It would not be consistent to take as much time and effort in screening a day laborer in a cement plant where there is no critical process or information as it would be in the screening of a cashier or of plant guards who are to protect money, valuable equipment, and vital information.

How is this discriminatory selection of new personnel to be accomplished? What questions should be asked and what investigations should be made? What should the Person-

* Editor: Stop Stealing in Your Plant, *Factory Management and Maintenance*, Vol. 112, No. 9, p. 83, Sept. 1954.

nel Manager or the Security Director look for?

First of all, it should be made clear that any questions asked, any investigations conducted, or any background checks that may be required are to be held strictly confidential by the company representatives concerned. The individual whose application is being studied has a right to expect that his past record, whatever it may be, will not be disclosed for the curiosity satisfaction of people not connected with the inquiry.

The Application Form

Depending upon the particular requirements of the business and the job, the gathering of the following information should be considered either on the application form or in a personal interview with the individual:

1. Full name, and any other name or aliases used, including the maiden name of married women and any previous married names.
2. Date and place of birth and whether citizen or non-citizen (if non-citizen, state country of citizenship).
3. Complete personal description, including height, weight, color of hair and eyes, and any marks, scars, deformities or amputations.
4. Fingerprints.*
5. Statement regarding loyalty to the United States (usually required of government job applicants).
6. Statement as to whether the applicant has ever been adjudged insane or has ever been committed to an insane asylum or treated for mental disorders.
7. Statement as to whether applicant has ever been convicted of a crime. If so, give details.
8. Statement as to whether applicant has ever used alcohol or drugs habitually or to excess.
9. Statement as to whether applicant has ever been discharged from any job, and if so, state the reason therefor.
10. Names, addresses and occupations of at least three persons who have known the applicant for five years or longer (other than relatives or previous employers) who can give a statement as to the character and habits of the applicant.

Background Investigations

In order to verify the accuracy of statements or of answers to questions on the application form, it will be necessary to make telephone calls, send letters, or even make personal visits to former employers and others.

In verifying previous employment, not only should the fact of employment be confirmed, but also the inclusive dates during which employment took place and the reason for leaving. If the applicant left any previous job under unfavorable circumstances, the reasons should be obtained as fully as possible so that proper judgment can be given to his suitability for the type of work for which application is made.

The applicant's education and personal references should also be verified. This information will form a permanent part of the personnel file.

Credit references may often reveal much about a person's character. Consequently, this part of the background investigation should not be slighted. If the banks, stores, or other establishments listed as credit references are local, perhaps this checking can be done by telephone. In jobs of a more critical nature, a personal visit may be necessary in order to get full details. Such things as whether the person is thrifty or loose with his money, the extent and type of his credit transactions, the promptness of making payments, his general credit rating, and other facts may be ascertained through a study of credit references.

Applicant's Character

The employer has a right to know fully the character and background of the people he hires. This is especially true in certain types of jobs where honesty and integrity are of primary importance in carrying out the duties of the position.

If a person's background is somewhat spotty, it does not mean that he will necessarily repeat his mistakes and that he therefore cannot be considered for any kind of related work. Proper judgment must be given to each individual case. The weight of experience shows, however, that once a person has violated the trust of his employer, it is easier for him to repeat his sins a second

* Fingerprinting is usually only required of applicants for government jobs, of employees working for contractors on government projects, or for applicants for jobs such as plant guards or watchmen where the person is to be deputized as a policeman upon his appointment. Although most private businesses do not require the fingerprinting of their employees, it is the most positive form of identification known. Fingerprints not only establish the positive identification of the individual, but may also establish the existence or lack of a criminal record. It is this connotation of a criminal stigma which has prevented the practice of fingerprinting from becoming more universal, although gradually the public is becoming more accustomed to the idea.

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time. A spotty past employment record or bad character reference indicates a person's failure to govern himself properly according to the rules of society. These are warning signs that should not be ignored by the personnel office when examining the applicant's background.

On the other hand, even though employees are thoroughly screened when hired and are then bonded, it doesn't mean that they may not succumb to temptations later on. The lack of a criminal record is no insurance that a person won't steal if the right opportunity presents itself.

Moreover, not all jobs are equally critical in their requirements for honesty, integrity, and the amount of trust to be placed in the individual. For instance, it would be wasted time and effort to run an extensive check on the references and background of a common laborer whose activities have no relationship to confidential information or critical material, either directly or indirectly. On the other hand, it would seem advisable to check rather closely the references and background of a person employed in the handling of securities, or who deals with documents of special value or material of a confidential nature. Likewise, persons handling or having access to business secrets, personal matters of customers or clients, or government employees engaged in projects involving classified papers or materials, should be given a thorough background check before they are permitted to take up their duties.

OPERATING CONTROLS

Controls should be instituted which will minimize theft and embezzlement. Management is not only responsible for providing suitable working conditions, adequate wages, and opportunities for advancement, but there is a moral obligation to take adequate steps to eliminate temptation from jobs.

Regular Audits and Inventories

First of all, management should treat all of the assets of the company much as a bank treats the cash in its vaults. Not only should all raw materials and finished products, merchandise, tools, as well as cash, be kept in adequately guarded locations with controls set up for their proper disbursement, but periodic inventories should be made of all items on hand. When such inventories show unexplained losses, immediate investigations should be made. Too often management is content to set up a "shrinkage reserve" item in the operating expense of the company, and remain content that this is a regularly expected expense of doing business. Such losses should be analyzed and their components should be fully understood in terms of theft, losses, breakage, failure to take markdowns, etc.

Institute and Enforce Company Regulations

Adequate rules and regulations for the control of company personnel during duty hours should be drawn up, publicized and enforced. These rules should cover all aspects of employee behavior, including restrictions on smoking in certain areas, procedures for checking personal packages, proper method of displaying company passes or badges, care of tools and other equipment, prompt reporting of lost or stolen tools or other items, obedience to safety regulations, maintenance, care and inspections of lockers, etc.

The degree with which the individual is surrounded by the proper disciplinary climate will aid correspondingly in controlling thefts, mishandlings, and will govern the general tone of the working atmosphere in the plant. Employees will generally take advantage of a situation when they can get away with it. When it is well known that the company rules are strictly and impartially enforced, fewer individuals will deliberately break them.

Indoctrinate the Supervisory Personnel

The process of indoctrinating all employees to be "company workers" is largely one of education. The workers must believe that the company is a good employer and that the work they are doing is the best of its kind. They must be taught pride in accomplishment. This will lead to better production, but also to better obedience to the company rules and regulations and group censorship of those who break them.

In this process the supervisor is a key man. Not only does he largely control the working atmosphere within his area by bringing the ideas of management to the worker, but he also should convey back to management the ideas of the workers. If this two-way relationship becomes one-sided, the proper balance is lost. Effective supervision is neither harsh nor lax, but maintained so that respect is retained on both sides. By imposing this firm but friendly discipline, supervisors are not only imposing mental controls over their men which aid in the obedience to the company rules and regulations, but which also act to prevent petty thievery and infractions of he safety regulations.

Physical Controls

Fences and walls around the perimeter of the plant property act as a barrier to prevent or impede the access or exist of unauthorized persons. Such barriers also serve notice that the enclosed area is private property, and entrance thereto is subject to the controls set up by management.

Various standards have been established for the heights of fences and the minimum size of openings which should be protected in order to prevent unauthorized entry.* These technical details will not be discussed here. It is sufficient to say that the degree of protection to be provided any particular plant should depend mainly upon the value of the contents and the ease of theft, the criticality of the materials and manpower involved, and upon the secrecy of the product. It will also be affected to a considerable degree depending upon whether or not the country is at war and whether the product is directly or indirectly connected with the war effort.

Maximum protection is given those products of a secret or critical nature. Such protection will involve not only fences, walls, and locked buildings and rooms, but also electronic protective devices and trained guards. A centralized lock and key control system is also vital for the proper maintenance of security, as well as adequate night lighting, properly designed so that the light is directed without glaring in the faces of those assigned to guard duties during the hours of darkness.

Control Movement of Personnel And Vehicles

It is a primary observation that in order to steal articles from company property, those articles must be carried or transported away from the premises. The two most common methods are by motor vehicle, or on the person of an employee who is leaving the plant at quitting time or during the day for some other reason. Other methods may sometimes be used, such as throwing articles over the fence or out of windows, or hiding them on or under railroad box cars while the cars are temporarily shuttled to a nearby siding.

If employees' personal cars are parked in areas separated from the plant grounds by an adequate fence, the theft problem is reduced mainly to that of checking the movement of personnel and the inspection of delivery or service trucks that enter the area. Employees are quite ingenious at devising methods for secreting stolen articles in order to carry them out of the plant undetected. Small items may be strapped to the waist, around a leg, or under the arms, while larger items may be inside a coat draped carelessly over one arm, etc. In some plants where the problem is acute, an inspectoscope* has been used with some success in detecting stolen articles secreted on the person or in lunch boxes, etc. The various methods used to combat the situation largely depends upon the particular problems and the character and type of personnel involved. No one method or device can be pointed to as a cure-all for the elimination of theft.

Personal Packages

Unless strict controls are instituted, one of the most common ways for employees to carry stolen articles out of a plant is to hide them in a package containing other items which belong to them. If such packages are not subject to inspection, it is relatively easy for dishonest employees to make off with large amounts of property in this manner.

To control this situation, personal packages should be checked into a package room at the time the employee enters the plant and not given to him until he is ready to depart for the day. The package should preferably be sealed with tape or in some other manner, and an identifying package check given the employee so that he can reclaim his package when he leaves. Any item purchased during the day should also be inspected and checked in the same manner.

CONCLUSION

It is not an idle statement that by controlling the actions of plant personnel one is controlling the most important aspect of Industrial Plant Security. If violations of plant regulations which cause fires, thefts, and accidents could be eliminated, most businesses and industrial plants would be relatively secure. The annual cost of these three items is in the billions of dollars. Industry should consequently select, train and supervise its employees with care and have an adequate and alert plant protection staff to aid in reducing these expenses. ★★★

* Gocke, B. W.: *Practical Plant Protection and Policing*. Charles C Thomas, Publisher, Springfield, Ill. Chap. 1, 1957.

* A device employing x-ray which makes possible the inspection of packages without opening them and the checking of personnel without conducting a body search.

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The Emergence of a Profession

By Harold J. Gardner

EDITOR'S NOTE: *In this inspiring article, Patrolman Gardner of the Cincinnati Police Department presents a message that will be read with interest by police officers in every section of the country. Analyzing the prerequisites of a profession, he administers the yardstick of professional competence to police service and points to some of the developments that are accelerating the march toward professionalization in this field. Officer Gardner is himself a symbol of the professional gains that have been made by the police during the past quarter century. The elevation of police personnel standards in recent years has brought about an increase in the presence of writing ability in the field, together with a professional attitude that fosters the dissemination of ideas and information. The* JOURNAL *welcomes contributions from other officers in the ranks, as well as from supervisory and command levels. A note to the Editor from prospective contributors will bring an attractive brochure indicating the broad range of subject matter in which the* JOURNAL *is interested.*

FROM History we know that men have grouped themselves together for many reasons, realizing that strength through unity was an effective way of achieving their common goal. The Feudal Systems during the Medieval Days were the result of people bringing themselves together for the purpose of making their communities and their families less vulnerable to attack by an enemy. For years this system proved practical because it served an important purpose, but, the day came when danger from attack subsided and gradually the system was abandoned.

A more permanent type group, inherited from our medieval ancestors, is the trade union—craftsmen who formed themselves into guilds, such as bricklayers, carpenters, blacksmiths, etc. Their purpose was to gain better working conditions, higher pay, and to learn how to improve their work. Labor unions of today are successors of the guilds of old.

Many examples can be cited of how man has achieved success and recognition by associating himself with others whose objectives and ideas are common with his.

Many vocations in life are of a nature where service is rendered instead of a commodity manufactured. People engaged in the practice of Law, Medicine, Acting, Teaching, Social Work, Law Enforcement and many others represent a segment of society whose work is service rather than material production. Since the service they render requires intellectual rather than physical skill, much of their time is spent in learning, educating themselves and expanding their mental capacity to meet the demands required of their calling. These vocations are professions.

It can be observed of most professions that they had their beginning as far back as History can record. Medicine, Law and Teaching were practiced in the days of the Old Testament. Engineers planned the Roman Viaducts of old, and the Pyramids stand as mute evidence of ancient, unknown architects. From the beginning, those engaged in a profession have strived to improve themselves, to create new ways, new ideas and to pass on their knowledge from one generation to another. Things we know today, we know only because of the efforts of people before us who were vitally interested in and dedicated to their work.

Today we benefit from the efforts of our ancestors and, in keeping with their spirit, it seems inherent in us to further our work so that our successors, too, will gain by our experience.

In our day it has become customary for us to look to some organization as the official representative of a certain profession. Doctors are associated with the American Medical Association; Lawyers are associated with the American Bar Association; and others, such as The Actors' Guild, Society of Automotive Engineers, and the newly organized Academy for Scientific Interrogation, afford the opportunity for professional association.

All professions meet certain prerequisites, as follows:

1. They represent an accumulation of knowledge and experience dating far back into History.

2. Their function in modern society is one of intellectual significance rather than one of material production or manual skill.

3. Their fulfillment is the result of education and devotion to their work instead of purely a means of livelihood.

4. They have organized themselves, according to their profession, for the purpose of laying down standards of practice and conduct and to benefit mutually from the experience and knowledge of each other.

5. They pass on to their successors the knowledge they have acquired, improved upon and added to.

Because many of us have chosen Law Enforcement as our life's work, we are vitally interested in seeing this field recognized as a profession. If the five points listed above represent a general and fair summation of the qualities of a profession, I would like to make an analogy with what we have or have not accomplished in the Law Enforcement effort.

Address: Harold J. Gardner, 3150 Bishop Street, Cincinnati 20, Ohio.

1. Modern Law Enforcement does represent an accumulation of knowledge and experience dating far back into History. However, it was never recorded as extensively and studiously as in the case of other professions. For those of us who are interested, it is a matter of learning from experience almost entirely. Very little had been contributed in writing until the last fifty years.

2. Law Enforcement's function in society requires intellectual rather than manual skill, and this is significant because of its intellectual rather than material contribution to our everyday lives.

3. Are most of us engaged in Law Enforcement because of our devotion to the work or strictly because we must earn a living? If we have the proper balance of both and if we are reaching for the fulfillment of our calling, the proper attitude can only come through educating ourselves and expanding ourselves intellectually.

4. Unlike other professions, we have not organized ourselves completely for the purpose of laying down standards of practice and conduct and for the purpose of benefiting mutually from the experience and knowledge of each other.

5. We can better give to our successors the knowledge we have gained by preserving for them, in writing, our experiences.

We can see then, that our task is one of being recognized as a true profession. Very generally, it is this:

a. Research—Look into the History of Law Enforcement from its inception and determine its progress through the years; analyze its history; its evolution; its effect on society and the general course of History; discover, also, the patterns of living that have influenced Law Enforcement. From such background and knowledge we can better ourselves, by better understanding past problems and mistakes, how situations were dealt with, either successfully or unsuccessfully. Then, we must express our findings in writing for the benefit of ourselves and our successors.

b. Ideally, law enforcement's function in society should be one of intellectual importance—the handling of criminals, procedure in court, educating the public so as to make society less vulnerable to the acts of criminals, etc. When we have raised ourselves to the level of professional recognition, then, like the doctor and patient; the lawyer and client; the public will place confidence in our efforts to educate them, by respecting our ability and advice. Today much of our skill is manual in form, especially in traffic enforcement, manual, in that we must post ourselves on the corner and signal the public when to "stop" and "go," or "walk" and "wait." If we were successful in educating them to the importance of stop and go or walk and wait we would have better served our public. A doctor prescribes medicine and instructs his patient in its use. But, it is not necessary for him to stand over the patient to see that the medicine is properly taken.

c. It is said that many of us are engaged in Police work, first because we love the work, and, secondly for the compensation. At least we will say so, if asked. Looking at it candidly, we can say, if our income depended on our individual performance there is no doubt that some would forget their devotion for the work, abandon it, and seek more lucrative pursuits in life. Since we are not compensated in the form of commission and our income is fixed, we may easily find ourselves confusing devotion with security, whereas, knowing we have security, we should feel free to devote ourselves entirely to betterment, and as we so do, so will we further assure our financial security with the public.

d. Item 4, above, deals with the fact that professional people are organized for the purpose of betterment. Their fraternities have the responsibility of setting up standards, of programming educational activities and seeing to the benefit of, first the profession and then the individual. Law Enforcement has no similarly extensive organization—a few perhaps, spotted across the country, with little or no liaison between them. We do have, however, organizations for securing better working conditions and social unity, but they offer little or nothing to inspire and awaken our intellectual interests. Our present organizations exist primarily for bettering the job for the man but not to better the man for the job. We are in vital need of a strong professional organization.

e. There is unlimited room for texts on Law Enforcement subjects. Our present libraries consist of very few

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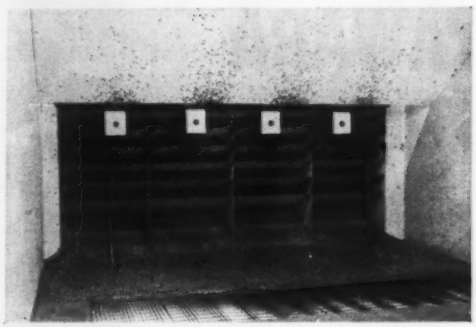

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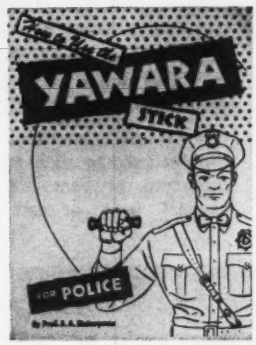

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books on Police work, many having been written a good many years ago, and covering the subject only generally.

The job of "professionalizing" Police work is a challenge that can be met only by the concerted efforts of all Law Enforcement Officers. Naturally, the responsibility rests most heavily with the top Police Administrators, but Officers in all echelons of Police service must get together and foment the idea among themselves. Ultimately, everyone will benefit, the Officers themselves, the enforcement agencies and the public through better and professional Police service. ★★★

INDIANA OFFERS PROGRAM OF CONSULTATIVE ASSISTANCE TO LOCAL COMMUNITIES

The State of Indiana has established a "Traffic Safety Survey Team Program" to provide technical traffic safety assistance to municipalities. This survey program represents a cooperative effort which involves four State Departments: Office of Traffic Safety, State Police, Highway Department and Department of Public Instruction. The Indiana Traffic Safety Foundation, a non-governmental group, also participates in an advisory and consulting capacity.

This service is made available to a city upon a request from the Mayor. After an official request is received, a team composed of staff representatives from the four agencies is sent to the community. The group investigates and evaluates the traffic activities of police courts, engineering, schools and other official and citizen bodies. Concentrating on priority needs of a practical program which can be feasibly initiated promptly by a community, the program does not include long-range planning. The survey team operates on the principle that where there is efficient performance of the basic fundamentals of an integrated traffic management program, safe and efficient highway transportation is achieved.

After completion of the investigation, evaluation and preparation of the report, a three-man consultant group reviews the findings before the recommendations are submitted to the municipality. Several Indiana communities have already availed themselves of this new technical assistance program. The State of Indiana is to be congratulated for taking this progressive step toward filling a basic need of communities for technical consultative traffic safety assistance, in an across-the-board integrated program approach.

OFF-STREET PARKING

New authority to engage in municipal off-street parking programs was granted in Nebraska and Tennessee, and the use of special assessments as a means of financing such facilities has been permitted in Alaska, Ohio, and Oregon. The "system" concept was adopted by Nebraska in authorizing facilities financed by revenue bonds backed by charges for parking therein and also by revenues of on-street parking meters. North Dakota municipalities have been authorized to finance parking lots by special assessments paid in part by charges for use of the facility "and of the . . . parking system of which it forms a part."

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POLYGRAPH and INTERROGATION

Edited by ROBERT D. STEEL

An Instructional Approach to Criminal Interrogation

By Frank D. Day

EDITOR'S NOTE: *Professor Day began his career in the police field with the New York City Police Department in June, 1931, and served with that organization until July, 1952, when he retired with the rank of Police Lieutenant. This period of continuous police service was interrupted temporarily between 1943 and 1946 when he was in the Armed Services and associated with the military police, military intelligence and the U.S. Provost Marshal. From July, 1952, until May, 1953, he was Federal Investigator, GS-9 U.S. Civil Service Commission in New York City and Cincinnati.*

In May, 1953, he became Associate Director, Southern Police Institute, University of Louisville, Louisville, Kentucky, and served that institution until December, 1956, when he was appointed as Associate Professor, School of Police Administration and Public Safety, Michigan State University, East Lansing, Michigan. Professor Day holds the B.S. degree in Political Science from St. John's University and the LL.B. degree from the same institution, which is located in Brooklyn, New York. He is a member of both the Kentucky and New York State Bar Associations.

More than 80 per cent of the time and energy expended by the police in the investigative process is accounted for in the interviewing and interrogation of suspects, witnesses, and complainants. It is a matter of current importance that this strategic tool subject is being included as a part of the curriculum in an increasing number of police training schools. Professor Day sets forth the training procedures followed with respect to instruction in interrogation at the School of Police Administration and Public Safety at Michigan State University, which offers one of the nation's outstanding programs in professional police training.

INTRODUCTION

THE importance of good leadership in law enforcement has fostered a tradition in the School of Police Administration and Public Safety, Michigan State University, which places emphasis on instruction at the police management level. Graduates are expected to prepare themselves for supervisory and managerial roles even though their entrance into law enforcement is generally at the operational level.

Proper direction is a necessity in effective law enforcement—stronger even than that which police leadership has developed over the past quarter of a century. Police administration cannot serve the common good under a limited leadership which leaves an imprint in but a few jurisdictions. The whole future of policing is closely allied to growth in police leadership which must become more universal.

The policeman's art of patrol and investigation is about the same the world over. These procedures can be the more readily learned through recruit training and in active police work than the tasks of police management. There are police techniques at the operational level of such importance, however, that provision should be made to train personnel in them in any police training program. The inclusion of the course in criminal interrogation represents one of the few departures from the objective of pointing instruction at the role of the police administrator. It is in the curriculum because it is an area of such vital importance in police work that any institution accepting the responsibility for training young men and women for a professionalized police service must furnish training in the area. Interrogation embodies skills which cannot be left entirely to chance after graduation.

THE NEED FOR SKILL IN INTERROGATION

It has been estimated that 80 per cent or more of police investigative time in preparing cases for trial is taken

Address: Professor Frank D. Day, School of Police Administration and Public Safety, Michigan State University, East Lansing, Michigan.

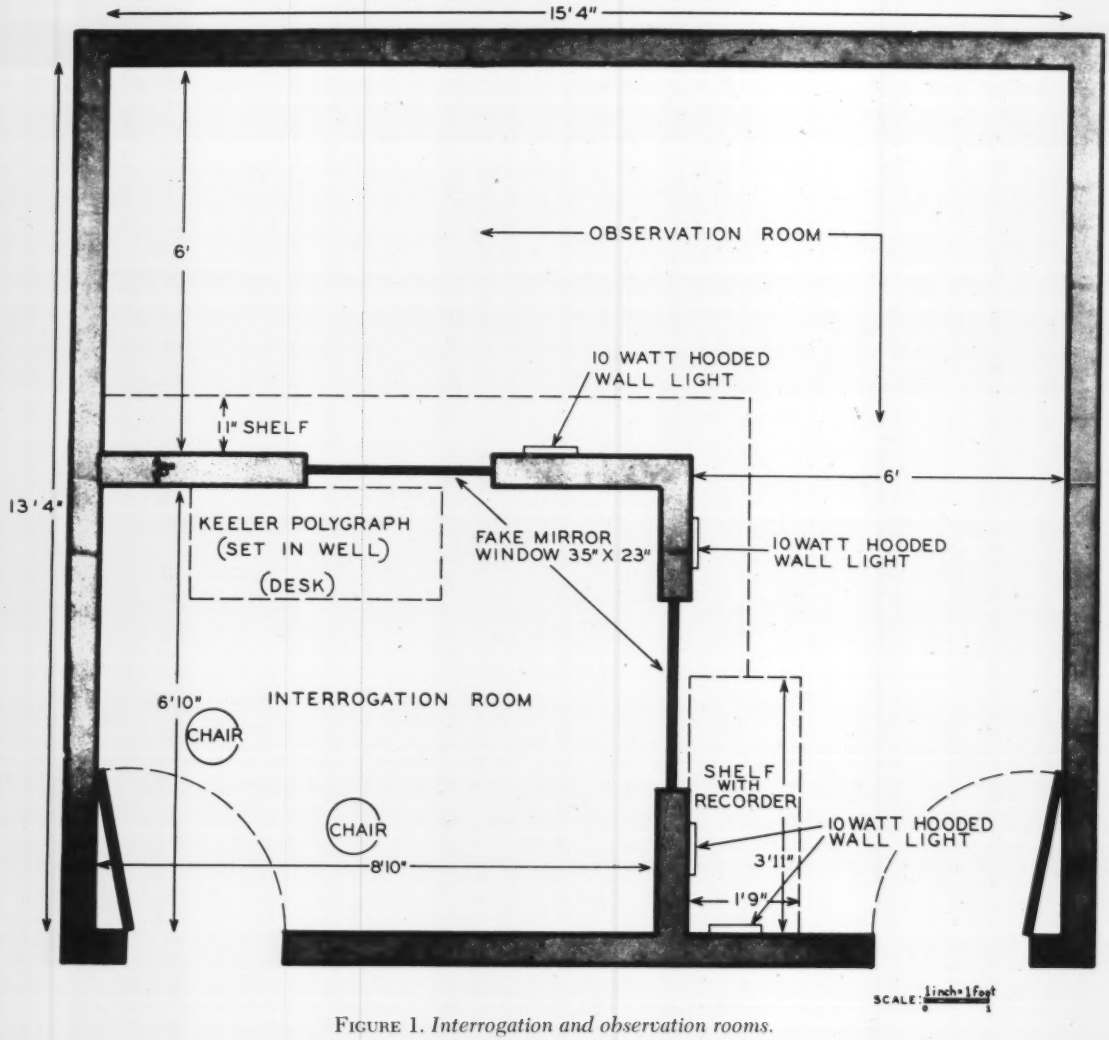

FIGURE 1. *Interrogation and observation rooms.*

up in talking to people.[1] The effectiveness of an investigator is largely dependent upon his ability to obtain information from complainants, witnesses, informants, and suspects.[2] How to obtain complete and factual information from people is of concern to ALL police officers—not just a few. Failures on the part of police officers and investigators in getting information impairs the over-all investigative effort. There is authority within the ranks of criminal interrogators advocating that the field of criminal interrogation be left to trained specialists.[3]

The art of asking questions for a purpose is not learned in either ordinary schools or by experiences gained in day to day associations. The hard and casual school of experience is too costly a method to use in acquiring ability. Academic training, in and by itself, will not turn out finished interrogators. The classroom can only lay a foundation. Anyone possessing certain personal qualities and properly applying rules and techniques learned in the classroom can become a good interrogator in a relatively short time in the field. The practical experience is as necessary as classroom training in developing skills as an interrogator.

THE PURPOSE OF TRAINING IN CRIMINAL INTERROGATION

The purpose of the course in criminal interrogation is to illustrate the application of certain interrogation principles, methods, and procedures, which when PROPERLY applied, help elicit information from people. This

[1] Schrotel, Stanley: Chief of Police, Cincinnati, Ohio, lecture, Southern Police Institute, University of Louisville, January 19, 1955.

[2] O'Hara, Charles E.: *Fundamentals of Criminal Investigation*, Charles C Thomas, Publisher, 1956, p. 79.

[3] Fred E. Inbau: *Lie Detection and Criminal Interrogation*, The Williams & Wilkins Company, Baltimore, Md., 3d ed., 1953, p. 197; Legal Pitfalls to Avoid in Criminal Interrogations, *Journal of Criminal Law, Criminology, and Police Science*, July-August 1949, p. 211. Vol. 40-No. 2.

is done by utilizing a combination of lecture method and laboratory sessions so that as knowledge is gained it can be applied to hypothetical problems of a practical nature. The course is of forty-two hours' duration. Twenty-two of the hours are given over to lectures and written examinations. Twenty hours are devoted to laboratory work with students taking roles of interrogators and subjects.

A major portion of any instructional program should be focused on subjects as they comprise the most important component of any interview or interrogation. Interrogation effort must be directed for the most part at making the subject wish to provide needed information. The efficiency of an interrogator is measured by his ability to bring the subject to the point where the subject chooses to be of assistance.[4] This has resulted in required "electives" in courses in psychology for police administration majors so that by the time junior standing is attained, when criminal interrogation is usually taken, some understanding of people, and their attitudes and behavior patterns, has been inculcated into their thinking.

Criminal investigations in most cases involve more interviews in developing leads than interrogations of actual suspects. Technical distinctions can be drawn, as between an interview and an interrogation, but for all practical purposes the terms can be used interchangeably. Substantially the same techniques can be applied to either situation. The instruction is developed on that basis incorporating various source material.

CLASSROOM INSTRUCTION

The class in criminal interrogation is limited to thirty students. The first few hours of the course are classroom lectures. The sessions are two hours long with a ten minute break on the hour. One session is held each week. A class is composed of male and female students. The young women will average about 10 per cent of a class. This stage of instruction places emphasis on the fact that the ultimate aim of any statement is to prove or DISPROVE the commission of a crime as related to criminal interrogation. The rights of a person being questioned are treated in some detail, exclusive of the legal aspects which are considered in another course. These concepts are brought out from time to time throughout the course.

A six-step procedure is outlined early in the classroom sessions for students to follow in laboratory sessions when they are ready to engage in practical work. The laboratory sessions are described later. For the present it will suffice to indicate that students are paired as interrogators and subjects. Students assigned as subjects prepare hypothetical police incidents in advance of scheduled laboratory sessions. An interrogator is given enough information concerning the incident to enable him to prepare a WRITTEN plan. The procedure develops an interrogation in a definite sequence recognizing, of course, that circumstances may at times demand some flexibility. Emphasis is placed on having the plan consider the various means for testing the truthfulness of the subject. It is designed to give a psychological advantage through the use of known facts and proper use of time, place and environment.[5]

1. Advance preparation by the interrogator to properly resolve issues presented by the incident.
2. A determination as to the REASON WHY the subject should be questioned.
3. An analysis of the incident into "known" and "unknown" details and the preparation of topic questions as to the "unknown" details and some questions of a general nature.
4. First, question the subject so as to place him at the scene of the police incident.
5. Secondly, ascertain from the subject what happened at the scene.
6. Finally, explore the "how's" and "why's" of the incident.

Classroom hours are apportioned to specific subject areas and written examinations. As each subject is a new and fresh personality much of the instruction concerns subjects. Subjects are classified according to the approach to be employed. The approach classification considers

[4] *Elements of Interrogation*, California State Department of Education, Bureau of Trade and Industrial Education, California Peace Officers' Training, Sacramento, California, p. 3.

[5] *Criminal Investigation*, Department of the Army Field Manual, FM 19-20, July 1951, p. 46.

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subjects as, (a) Willing and able, (b) Inadequate because of some blockage, or as, (c) Unwilling.[6] This method of classifying subjects for the purpose of criminal interrogation has much in its favor in contrast to other methods which might be used. The available literature has shortcomings, in any given volume, which tend toward inadequacies for a proper treatment of the subject.

COURSE CONTENTS

Part	Topic	Classroom Hours
I.	How to Compose and Ask Questions	2
II.	General Rules for Any Interrogation	4
III.	The Subject of the Interrogation	8
IV.	Special Techniques for Difficult Interrogations	1
V.	The Preparation and Signing of Written Statements	2
VI.	Case Preparation—Polygraph Demonstration	2
VII.	Written Examinations	3
	Total Classroom Hours	22

Grading System

Mid-term examination	20%
Term paper	20%
Laboratory sessions	20%
Final examination	40%
	100%

[6] Dienstien, William: *Technics for the Crime Investigator*, Charles C Thomas, Publisher, 1952, p. 98.

Outside readings are required to supplement the material of the textbook used for the course.

A term paper of 2,500 words on some aspect of interrogation is required. The topic is selected by the student with the approval of the instructor.

INTERROGATION AND OBSERVATION ROOMS

The facilities for laboratory sessions are specially designed for instructional purposes. Figure 1 illustrates the layout of the two rooms and the furnishings and equipment.

The interrogation room is panelled in cellotex. A wool carpet laid on an underpad covers the floor. This effects good acoustics. The room is semi-soundproof. The furnishings are simple. In the room is a desk containing a polygraph, set in a well. The desk is not used in practice interrogations and is kept near the wall. Toward the end of each term a qualified polygraph operator spends about one hour demonstrating its operation. The machine is used from time to time by the university campus police and outside agencies. This has not caused any conflict in the instructional program. Two plain chairs are in the room. An overhead ventilator and a wall-type exhaust fan improve the ventilation. The lighting is overhead fluorescent. Two concealed microphones are in the room. They are wired to amplifiers in the observation and classrooms, and to a recorder in the observation room. Two fake mirror windows, 23" x 35", are in the room for instructional purposes.

The observation room is in an "L" shape. The instructor and students, other than the pair working in the interrogation room, hear and observe what takes place within the interrogation room from positions at the fake mirror windows. A recorder on a shelf near the entrance door to the observation room is used to tape interrogations. Another ledge-like shelf is installed on the wall and extends around the "L" contour of the wall for note taking. Normal lighting is provided by overhead fluorescent fixtures. When an interrogation problem is in progress, four hooded, wall-type lamps, using 10-watt bulbs, furnish enough light so notes can be made. The dim light is conducive to better vision as to what occurs within the interrogation room and prevents the team in the interrogation room from seeing the observers.

PREPARATION FOR LABORATORY SESSIONS

The class of thirty students is divided into two sections for practical work in the interrogation room. Each section meets for two hours each week. The students show much interest, as might well be expected, in this phase of the course.

Students are paired as subjects and interrogators. Women students are paired with women students. Approximately thirty interrogation problems can be run by each section during the ten two-hour periods. Three problems are presented in a two-hour period. Provision is

made within the time for briefings, some play backs from tape recordings, and critiques. The schedule gives each student an opportunity to participate as subject two times, and as interrogator two times, during the quarter session. Subjects make up problems. Problems must conform to certain standards—quality, moral, and ethical. Sample problems are furnished a subject to assist in the preparation of the first problem. This achieves a uniform format for future problems, or cases, as they are sometimes called.

Two statements, each in duplicate, are prepared by a subject. Statement No. 1 contains facts known to the interrogator. The statement is used in lieu of information which would be known normally in actual practice. Statement No. 2 is in three parts. The first part outlines the story the subject will give the interrogator when questioned; the second part is a recital of the actual facts of the simulated police incident; and the third part describes the attitude the subject will take when questioned –mental and behavior.

The originals of each statement are given to the instructor a few days in advance of the date a problem is scheduled and, at the same time, the subject furnishes the interrogator in the problem with the duplicate copy of statement No. 1 to enable the interrogator to do his preparation. The duplicate copy of statement No. 2 is kept by the subject.

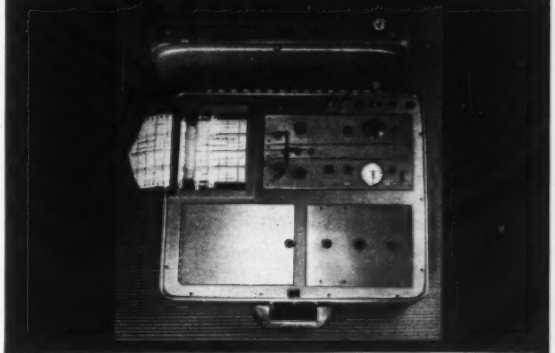
LABORATORY SESSIONS

The section meets in the classroom. The interrogator briefs the class on the facts as set forth in statement No. 1 and, when helpful to an understanding of the problem, makes use of the blackboard for sketches and diagrams. The interrogator leaves the room. The subject outlines the contents of statement No. 2. These procedures enable the observers to follow the progress of the interrogation and assists them in appraising the performance of the interrogator and the subject.

With these preliminaries out of the way the interrogator and subject go to the interrogation room and the remaining members of the class take up positions in the observation room facing the fake mirror windows. Twenty minutes are allocated to an interrogation. The time is usually much too short but the limitation is necessary in order to allow the students to participate more frequently. Particular attention is given to certain factors in the mock interrogation. Some of the factors concern the opening of the interrogation, kinds of questions asked, the approach to note taking, and closing remarks.

An interrogation begins with a couple of sharp taps on the fake mirror window as a signal. A similar signal is given seventeen minutes later to inform the interrogator that three minutes remain in which to terminate the interrogation. An interrogator seldom manages to obtain a complete statement in the time allowed. The three minute interval permits the interrogator, in theory, to bring relationships back to an amicable plane.

LIE DETECTORS



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The interrogation is recorded. Notations are made as to tape footage when something of significance or interest takes place. The observers use a check-list form, illustrated in Figure 2, to evaluate the interrogator and the subject. The subject is rated mainly on the quality of the case, which he prepared, how well he portrays his role, and his cooperation with the interrogator when techniques are employed which have been considered in class as applicable to a certain type of subject.

CONCLUSION

Periodically investigations of police methods highlight reprehensible practices in some localities in regard to interrogations of criminal suspects. The conscientious police investigator reads the reports with as much repugnance as any average citizen. He knows that the use of force and coercion in obtaining information are clear signs of poorly trained officers who allow emotion to replace reason when confronted with a difficult interrogation.

The resultant publicity with loss of public support, so sorely needed by policing, can be held to a minimum. The key is in knowledge and in the application of basic general rules of interrogation. One need not search far to discover how frequently a simple rule such as privacy is ignored. An automobile accident and the ensuing investigation, more often than not, will furnish ample evidence. Primary deficiencies can be easily corrected.

SCHOOL OF POLICE ADMINISTRATION AND PUBLIC SAFETY
MICHIGAN STATE UNIVERSITY

Criminal Interrogation
PLA 472

Laboratory Session

Check-List

Interrogator _____ Subject _____ Observer _____ Date _____

The Interrogator		The Subject
1. Advance preparation?	9. Use of notebook?	1. Played required role reasonably well?
2. Opening remarks?	10. Use of special technique?	2. Cooperative when interrogator used acceptable techniques?
3. Solicited narrative?	11. Controlled interview?	
4. Asked single questions?	12. Exercised self-control?	
5. Asked leading questions?	13. Obtained complete information?	
6. Interrupted subject?	14. Gave up too easily?	
7. Gave away information?	15. Closing remarks?	
8. Assisted subject?		

REMARKS:

Grade: Case ..... Interrogator ..... Subject .....

Scoring system: Very good: 3; Satisfactory: 2; Unsatisfactory: 1.

FIGURE 2. *Check-list form, 8½ x 11.*

Training in basic techniques of interrogation can do it. The needs of the criminal investigator to meet more desirable ethical standards are more challenging. They can be met, too, without much difficulty. Good training can do much to meet these needs. Whether this is done, or not, depends on the way police administrators fulfill their responsibilities in seeing that such training is provided.

A police officer is in error if he thinks principles underlying constitutional guarantees are actually inconsistent with effective enforcement. The well-trained officer recognizes, believes in, and safeguards the personal liberties of the individual as set forth in federal and state constitutions. The safeguards, to him, are the bulwarks of a free people with their evolution in the history of mankind. His philosophy in questioning complainants, witnesses, informants, and suspects, can be summed up in the words of Ella Wheeler Wilcox that, "no question is ever settled until it is settled right." ★★★

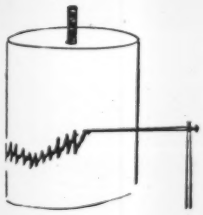
POLICE COURSE IN EXECUTIVE DEVELOPMENT INSTITUTED

Ranking notables in the field of public administration were present to commemorate the first graduation exercises recently of the newly instituted New York City Police Department's Executive Development Course, where Police Commissioner presented Certificates of Achievement to 31 officers in that Department, including one Assistant Chief Inspector, six Deputy Chief Inspectors, nineteen Inspectors and five Captains.

Guests and speakers at the exercises included Dr. Buell G. Gallagher, President of the City College of New York; Dr. Emanuel Saxe, Dean of the Baruch School; Dr. Luther Gulick, President of the Institute of Public Administration; Charles F. Preusse, City Administrator; Abraham D. Beame, Director of the Budget; Joseph Schechter, Director of Department of Personnel and Harold A. Felix, Commissioner of Labor. Also present at the ceremony was a new class of 40 officers of the Department who will soon begin the Spring semester of the Executive Development Course.

The Executive Development Course for superior officers in the rank of captain and above was instituted on September 16 to develop police executive material for the future. The course under the direction of Inspector Robert R. J. Gallati, Commanding Officer of the Police Academy, consisted of fifteen conference sessions held at the Institute of Public Administration, and conference leaders included the faculty of the Police Academy and heads of other city departments and agencies.

The subjects discussed at the conferences included: Training and Leadership; Morale and Discipline; Principles of Planning; Major Trends in Modern Administration; Conference Leadership; Creative Thinking; The Philosophy of Work Improvement; Principles of Organization; Management Controls (Performance Budgeting); Criminal Statistics; Labor and the Police Department; and The Role of the Commanding Officer in Community Relations.



Depot Order 5800.1

EDITOR'S NOTE: *Depot Order 5800.1, by Major General T. A. Wornham, USMC, Commanding General, Marine Corps Recruit Depot, San Diego, California, is presented herein with the permission of the Commandant of the Marine Corps, and General Wornham, who is to be commended for his recognition of the need for regulations, such as this Order exemplifies. The U. S. Marine Corps in taking this action sets a precedent and an example which should be considered seriously in every area, both Military and civilian, wherever the polygraph is employed. This is a very significant step forward in establishing professional standards for the field.*

Master Sergeant Robert L. Collier, USMC, currently serving as Counter-Intelligence Chief with the Depot's G-2 Section, was responsible for research and compilation of material leading to the publishing of this Depot Order. Sergeant Collier graduated from the Army Lie Detector School, conducted by the Provost Marshal General's School at Fort Gordon, Georgia, in April 1954 and is a member of the Academy for Scientific Interrogation.

*The demand is great for service-wide instructions, in all branches of the military and other governmental agencies, similar to those contained in this Order, which was patterned after Army Special Regulations and Technical Instructions.**

Subj: The Lie Detector, regulations governing its utilization

Ref: (a) CMC ltr of 24 Jun 1954 DKA-442-etf

(b) Department of the Army Technical Bulletin TB PMG22 of 10 Feb 1955

Encl: (1) Lie Detector Examination Statement of Consent

1. Purpose. To publish information, promulgate regulations and establish responsibility regarding the utilization of the Lie Detector.

2. Discussion. a. Reference (a) adopted the Lie Detecting Set AN/USS (2B), (Stoelting Deceptograph), hereinafter referred to as lie detector, as a Marine Corps item for use at certain designated posts and stations.

b. Reference (b) promulgated certain instructions regarding the utilization of the lie detector within the Department of the Army.

c. This order does not provide instruction in the technical operation of the lie detector or in the evaluation of results obtained through its use. It does discuss the legality of the use of the lie detector, the responsibilities of the investigator, the lie detector examiner, the values and limitations of the lie detector, its most effective uses and those practices which are either prohibited or detrimental to its effectiveness.

d. The lie detector is a diagnostic aid in interrogation and if appropriately used will provide immeasurable assistance in investigations. The effectiveness of this instrument depends only slightly on the instrument itself and predominately depends on the training, experience, skill and integrity of the examiner.

3. Operational Control. a. The operational control of the lie detector assigned to this Depot is vested in the Depot Provost Marshal with the exception contained in paragraph 3d. of this order. This does not include control over the instruments assigned to Communication-Electronics School Battalion, which are for mechanical instructional purposes only and come under the jurisdiction of the Commanding Officer, Communication-Electronics School Battalion. These instruments will not be used for conducting lie detector examinations.

b. All requests for lie detector examinations of members of this Command will be referred to the Depot Provost Marshal who, with the exception contained herein, will make the final decisions as to whether or not an examination will be conducted.

c. He shall give due consideration to the recommendations of the trained lie detector examiner both as to the suitability of the subject and the possible results which might be obtained, and/or if the particular case is an appropriate one for the lie detector.

d. Requests for lie detector examinations from local civil law enforcement agencies and/or other civilian sources will be referred by the Provost Marshal to the Commanding General for a decision. This procedure will be followed regardless of whether Marine Corps equipment is to be used or not.

4. Lie Detector Examiners. Lie detector examinations of members of this Command during the course of official investigations conducted by this Command will be administered only by Marines who:

a. Have successfully completed the Lie Detector Course, Provost Marshal General's School, U.S. Army, Fort Gordon, Georgia, or other preferable Polygraph Schools of established reliability, e.g. Keeler Polygraph Institute, Chicago, Illinois.

b. Have been designated in writing by the Commanding General as accredited lie detector examiners of this Command.

5. Legal Status. The lie detector is an aid to investigation. If a person agrees to take the test and it is properly conducted, his rights are not violated. The lie detector examiner's

Address: Colonel R. Lloyd, United States Marine Corps Recruit Depot, San Diego 40, California.

* Dept. of the Army Technical Bulletin, T.B. PMG 22 of 10 Feb. 1955. Dept. of the Army Special Regulations No. 190-30-10 of 8 Oct. 1951.

Master Sergeant Robert L. Collier, USMC, Counter-Intelligence Chief, Marine Corps Recruit Depot, San Diego, California, shown seated at the Polygraph, studying polygrams obtained in an examination.

opinions and his evaluation of the test charts are not evidence and normally cannot be entered in court.

a. Normally the examiner testifies in court to show the voluntary nature of a statement, admission, or confession obtained after an individual agreed to the test. His testimony sometimes covers the voluntary signing of the statement of consent, the equipment used, and the conduct of the examination.

b. A legally obtained statement, admission, or confession may be entered in evidence (MCM 1951); use of the lie detector does not alter this fact. If the examiner receives an oral confession, he may testify in court about it.

c. Before any member of this Command is subjected to a lie detector examination, he shall be informed by the lie detector examiner of his legal rights against self-incrimination and self-degradation and the subject must sign a statement of consent, enclosure (1).

(1) Before a person subject to the Uniform Code of Military Justice is asked to sign a statement of consent, he must be carefully and fully informed of his rights under Article 31 of the Code. The mere reading of Article 31 is not enough; the examiner must explain it in language the person can understand. The person must be informed of the offense of which he is suspected or accused. The examiner must emphasize that the examination is given only to a person who voluntarily agrees to take it and that no person can be forced to take it or to incriminate or degrade himself in any way.

(2) Before a person not subject to the Code is asked to sign the statement of consent, he must be carefully and fully informed of his rights under the Fifth Amendment to the Constitution of the United States and of the contents of Article 31 of the Code. He must be treated in accordance with these rights.

6. Procedures for requesting lie detector examinations. Commanding officers, investigating officers, or investigators requesting lie detector examinations will use the following procedure for such requests:

a. All requests for lie detector examinations will be referred directly to the Depot Provost Marshal.

b. A lie detector examination will not be approved until enough facts have been established to permit the examiner to prepare a complete set of suitable questions.

c. A lie detector examination will not be used as a substitute for an investigation or before there has been a definite indication of false testimony. The lie detector is not used to decide whether a person is innocent or guilty. The courts will make that decision. The lie detector is used to help find out if a person is telling the truth.

d. The authority requesting a lie detector examination may be furnished a copy of the written report, however, the lie detector examination charts will be interpreted only by the examiner who conducts the examination. Requests from persons other than the subject to see or study the charts will be referred to the Provost Marshal. Normally such requests will be disapproved except in those rare cases when the charts are subpoenaed through proper legal procedures.

7. Prohibited Practices. a. Exam-

LIE DETECTOR EXAMINATION
STATEMENT OF CONSENT

PLACE:..... DATE:..... TIME:.....

STATEMENT OF CONSENT BY:.....
(Name) (Rank) (SN)

STATEMENT TAKEN BY:.....
(Name) (Rank) (SN)

In the presence of the witness(es) whose signature(s) appear(s) below, Article 31 of the Uniform Code of Military Justice (and the Fifth Amendment to the Constitution of the United States) (strike out only if person making statement IS a member of the Armed Forces (has) (have) been read to me and my rights thereunder have been explained to me by ..... who informed me that he is a lie detector examiner of the United States Marine Corps. He has informed me that this statement is being taken in connection with the investigation of .....
.....
[of which I am (accused) (suspected)] (strike out words between brackets, if inapplicable)
.....

He explained to me that I cannot be compelled to incriminate myself or to answer any question to which may tend to incriminate me. He explained to me that I do not have to make any statement regarding the offense(s) of which I am suspected or accused, and that any statement made by me may be used as evidence against me in a trial by court-martial or in any other military proceedings. He also explained that I do not have to make any statement that is not material to the issue and which may tend to degrade me. He further explained to me the nature of the lie detector examination and told me that I cannot be required to submit to such examination without my consent. Understanding fully my rights as stated above,

I, ..., do hereby, this date, voluntarily and without duress, coercion, unlawful influence or inducement, or promise of reward, or clemency or immunity, submit to examination with the lie detecting set.

....
Signature of examiner Signature of person to be tested

WITNESSES:

....
Signature, rank and serial no. Signature, rank and serial no.

ENCLOSURE (1)
DO 5800.1

ination will be given only with the voluntary consent of the person to be examined after his legal rights as to self-incriminating statements have been explained to him.

b. No indication will be given to any person or placed in any report that a person will be considered guilty because he refused to submit to a lie detector examination.

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c. Examination will not be given until the examination procedures and the purpose of the examination have been explained to the subject.

d. No attempt will be made to use the lie detector for the mental or physical evaluation of any person.

e. An examiner will not examine any person who is obviously mentally or physically unfit or who has been made unfit for the examination by improper or prolonged interrogation.

f. A lie detector examination of a suspected homosexual will not be undertaken unless there is an allegation of an overt act of homosexual behavior, and not until investigation establishes sufficient factual information to indicate the existence of a crime.

g. A lie detector examination will not be administered to persons subject to the Uniform Code of Military Justice in cases of offenses punish-

Major General T. A. Wornham, USMC, Commanding General, Marine Corps Recruit Depot, San Diego, California, shown presenting commendation from the Commandant of the Marine Corps to Master Sergeant Robert L. Collier, USMC, for his efforts in compiling Depot Order 5800.1, and related recommendations.

able under the authority of the Code by confinement of less than one year, in conformity with reference (a).

h. Lie detector examinations will not be administered to members of this Command on whom official charges have been preferred in accordance with the Uniform Code of Military Justice except in those rare instances where a stipulation is entered into between the accused, defense counsel, trial counsel and/or court.

i. A Woman Marine of this Command may not be administered a lie detector examination without compliance with paragraph 15101.3 of the Marine Corps Manual.

j. With the exception of provisions in paragraph 7.i. above and examinations that require the use of interpreters, requests to witness or sit in on lie detector examinations will be disapproved.

8. Rights of the Subject. Any person subjected to a lie detector examination has the below listed rights and if these rights are not considered the usefulness of the lie detector as an instrument in the detection of deception will be measurably reduced.

a. The subject has the right to be examined by a qualified examiner.

b. The subject has the right to be determined fit for examination.

c. The subject has the right to be informed of the reason for the lie detector examination.

d. The subject has the right to have an explanation of the lie detector and what it does.

e. The subject has the right to consent to the lie detector examination.

f. The subject has the right to refuse to submit to the lie detector examination.

g. The subject must not be compelled to undergo prolonged questioning.

h. The subject should not be exposed to oral vilification or abuse.

i. The subject must not be exposed to physical abuse.

j. The subject must not be exposed to mental or psychological abuse.

BY COMMAND OF
MAJOR GENERAL WORNHAM

R. LLOYD
Colonel, U. S. Marine Corps
Chief of Staff

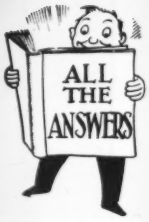
DISTRIBUTION: "I"

OFFICIAL:
W. A. SEARIGHT
Lt. Col. USMC
Depot Adjutant ★★★

Keeler Polygraph Institute Schedules Training Sessions

The third and fourth classes at the Keeler Polygraph Institute for 1958 are scheduled for July 21-August 29 and September 22-October 31. As in the past, students will find that they have at their complete disposal the entire facilities of the Institute. The physical plant includes the main lecture room, two complete polygraph interrogration rooms, adjoining observation facilities, with additional practice rooms equipped with polygraph instruments. In addition, a reference library is maintained with some 250 volumes covering all phases of polygraph examination, history and techniques. These books are available at all times for evening and weekend study.

During the full six weeks of the school, classes are conducted 6 hours per day, five days per week. The majority of lectures are given by members of the Institute staff, all of whom are specialists in the polygraph field. The lectures and all other phases of the course are under the direction of Mr. Albert Breitzman. Other members of the staff include Dr. Herbert P. Lyle, Past-President of the Academy for Scientific Interrogation, and Professor Robert Scott of the Law School, Michigan State College, and Dr. Norman Walter who presents the twelve hours devoted to psychology. The cost of the course is $500 and this covers the use of all equipment and facilities necessary to complete this program of instruction. Requests for application should be forwarded to the Keeler Polygraph Institute, 3758 West Belmont Avenue, Chicago 18, Illinois.



The Use of Tests in the Selection of Supervisors

By Herbert H. Meyer and Greydon M. Worbois

EDITOR'S NOTE: *Dr. Meyer is presently Consultant—public and employee relations research of the General Electric Company. He was formerly a Consultant with the Industrial Division of The Psychological Corporation (1950-53). During the period 1948-50 he was Assistant Industrial Psychologist for the Detroit Edison Company in charge of Selection Research. Dr. Meyer received his M.A. and Ph.D. degrees in Psychology from the University of Michigan and also taught courses in General Psychology and Industrial Psychology at that institution.*

Dr. Worbois received the M.A. degree from the University of Illinois in 1937, and the Ph.D. degree from Iowa State University in 1942. He was Registrar and Professor of Psychology and Education at Greenville College from 1937 to 1939 and since 1946 has been associated with the Detroit Edison Company as Industrial Psychologist. During the period 1942-46 he was a personnel consultant with the U.S. Army, with the rank of Major. His professional affiliations include Diplomat (Industrial), American Board of Economics in Professional Psychology; Fellow, American Psychological Association; Member, Midwest Psychological Association; and Member, Michigan Psychological Association.

THE use of test results in the selection of supervisors may often present certain problems that are not encountered in the more customary applications of psychological tests.

Test results are used most commonly in industry as an aid in the selection of applicants for entry jobs. In this situation, the employer usually knows little about the applicant, and the applicant is aware of that fact. The applicant may feel that the tests give him a chance to sell himself—that he's being given impartial consideration. In addition, the applicant is often recently out of school and familiar with tests.

The situation with respect to prospective supervisors is often very much different. In most organizations, supervisors are promoted from the ranks. They may have had years of service in the company. Usually they have been out of school for many years and, therefore, are likely to be rather unfamiliar with modern psychological tests. Also, they may feel that their superiors know or at least should know, a great deal about their work. For these reasons, supervisory applicants may be somewhat apprehensive about relying on tests for a fair evaluation of their potentialities.

THE USE OF TESTS IN SUPERVISORY SELECTION

A study was conducted recently in the Detroit Edison Company to determine whether psychological tests could be of aid in the selection of new supervisors. Because of the nature of the company and company policy, the considerations mentioned above played an important part in planning the study. The following rules were set down which seemed to be advisable if the use of tests in supervisory selection were to be successful:

1. The tests should not minimize seniority rights.
2. The tests should not outweigh the performance record of any employee.
3. The tests should not supplant any of the present practices in the selection of supervisors.
4. The use of tests should encourage a consideration of factors other than those measured by the tests.
5. The final selection of a supervisor should not rest on test scores.

These rules are very different from those which might be set down for the selection of new employees for beginning jobs. However, they seemed to be advisable, and experience has borne out their soundness. Testing for supervisors was regarded as a problem of *supplying information* which could be considered along with many other factors. It was thought of as a means of *adding to* present evidence of the applicant's potential supervisory success. It seemed important, accordingly, to coordinate the testing with current practices in supervisory selection, and to set up precautions against passing the responsibility for selection on to the test results.

OTHER CRITERIA FOR SUPERVISORY SELECTION

Adding tests as a method in the selection of supervisors does not imply that *current* methods are bad. They may be very good. A great deal of evidence concerning an employee's potentiality for supervision is usually available. This includes:

1. Length of service—the policy of this company is to promote from within. Seniority, accordingly, is important in selecting a supervisor. Since most of the employees concerned regard their affiliation with the company as a career, many prospective supervisors have twenty, thirty, or more years of service. This factor, of course, is a matter of record.

2. Technical ability—both performance on the job and records of previous experience usually provide an adequate evaluation for this area.

3. Those general factors commonly thought of as character and personality—employees over many years of service show their traits in this area. While personality traits are frequently obscure, it can hardly be denied that supervisors learn a good deal about employees in small groups over many years of working together.

There are many other things, of course, to consider in supervisory selection. Hundreds of "lists of traits" have been proposed. The point is,

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° Courtesy, American Management Association, 1515 Broadway, New York 36, New York.

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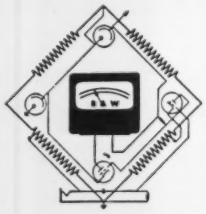
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however, that some of these things are already known, or can be secured easily in the records. It would be quite unwise to disregard all this evidence and substitute test results by themselves in selecting a supervisor.

Even developing tests for all the characteristics which are unknown or difficult to predict would be a colossal task. Therefore, it was decided that the greatest contribution could be made by concentrating on a particular aspect or area of the supervisory job in which prediction was most difficult.

The study of the problem in the company revealed that most help in selection was needed in the "human relations" area. That is, it was difficult to predict a person's ability in the interpersonal aspects of leadership—the ability to gain the cooperation and respect of the members of a work group. Not only was ability in this area difficult to predict, but also it was in this aspect of the job that most failures occurred. It was decided, therefore, to see whether tests could be developed to measure ability in handling the "human relations" problems of supervision.

TESTS OF ABILITY IN "HUMAN RELATIONS"

Identifying the problem area for investigation was relatively easy. However, the problem of developing objective tests to measure ability in this area was not so simple. The experience of previous investigators had shown that potential ability in "human relations" was not easy to measure.

Various approaches were tried in an attempt to develop satisfactory measures of qualities important to success in this area. These were pretested on different groups within and outside the company. Some of these tests were discarded; others were further developed and refined.

The greatest difficulty was encountered in the attempt to develop measures which would not be influenced by the supervisor's superficial knowledge of human relations principles. It was found that, although such knowledge was related to the supervisor's score on a general intelligence test, it was not necessarily predictive of his behavior on the job. Some supervisors apparently know the generally accepted principles of good leadership, but when confronted with a problem on the job, they don't apply the principles. In order to obviate this difficulty, the principle of projection was used in one measure, and techniques similar to those used in forced-choice merit rating scales[1] were used in others.

TESTING THE TESTS

The most promising of the tests developed were administered for tryout to 231 first-line supervisors in four departments in the company. These tests were called:

1. Human Relations—A Test of Ability to Predict Human Reactions. In this test, the subject was asked to predict, from brief descriptions of persons, how they would react to certain situations. For example, in a representative unit of the test, a short description was presented of an industrial worker. This was followed by a number of questions, each describing an interpersonal situation involving that person as one of the characters in the situation. Four alternative courses of action that he might take in the situation were then presented. The testee was asked to indicate which of the courses the person described was likely to take.

2. Personal Interest Inventory. This consisted of interest items and questions which pertained to the individual's background. Particular attention was given in developing the questionnaire and the scoring key to prevent "throwing" the answers. If the "correct" answers were obvious, an applicant might seek to get a high score rather than be perfectly frank. If this happened, the test would probably not be a very valid measure of the person's real traits. Some results on this point are given in a later section.

3. Supervisor's Opinionnaire. Each item in this test presented three rules of advice to supervisors. The testee was asked to rank the three rules in the order of their importance to good supervision. It was scored on the basis of the degree to which each rule indicated the importance of considering the other person's point of view.

4. Description of Supervisors. Each item of this test presented two adjectives describing personality traits. The testee was asked to indicate which of the two traits was more desirable for a supervisor to possess. He received credit for choosing social traits, such as "tactful," as against individualistic traits, such as "industrious."

In addition, the cooperating first-line supervisors were given the Wonderlic *Personnel Test* (a test of general mental ability) and the *Word Fluency* test of the Primary Mental Abilities test battery. It was intended to use these primarily as control measures—that is, to determine to what extent these factors influenced scores on the tests of "human relations" ability. Personal information, such as age, education, and experience, was also obtained for this purpose.

[1] The forced-choice method of merit rating is described in detail in "Forced-Choice Performance Reports: A Modern Merit-Rating Method," by Marion W. Richardson, *Personnel*, November, 1949; and "Inventory Planning and Development of the Management Organization," by Charles W. Foreman, *Personnel*, January, 1951.

THE CRITERION OF SUCCESS

The most critical aspect of a study of this kind is securing a good measure of success to use as a standard against which to validate the tests. In this study, as is very often the case in studies of this kind, it was necessary to rely upon the judgments of the supervisors' superiors.

The situation was somewhat complicated by the fact that a comparable measure had to be obtained for supervisors in different departments and in different work locations. Each of the superiors who judged the ability of supervisors usually was able to compare the performances of only a few men.

In order to obtain a measure which would be reasonably comparable for all the supervisors in the sample, a check-list type rating scale was developed. With this type of scale, it was possible to secure a detailed description of the way each supervisor handled the "human relations" aspect of the job. From this, an objective score—or criterion—was obtained. Several checks indicated that this criterion was a satisfactory index of how the supervisors had handled their "human relations" problems.

RESULTS OF TESTS

Comparisons were made between test scores and the criterion ratings for the sample as a whole, for the different departments considered separately, and for the types of groups supervised—that is, for supervisors of *office* workers and for supervisors of *trades and operating* workers. In addition, the sample was divided into two representative random samples, called Samples A and B, to make possible a cross-validation of some of the measures.

The results of these comparisons may be summarized briefly as follows:

The *Human Relations* test showed a significant relationship to the ratings in all the groups. Furthermore, this relationship was found to be very consistent in the different departments and in the different types of work groups.

The *Personal Interest Inventory* showed a significant relationship to the ratings in each department and both types of work groups. The results were not as consistent as for the *Human Relations* test, but the relationships found for *office* and *trades and operating* supervisors did not differ significantly.

Scores on the *Supervisor's Opinionnaire* and *Description of Supervisors* tests did not show significant relationships to the ratings.

The *Word Fluency* test, somewhat unexpectedly, showed a significant relationship to the ratings for supervisors of office workers. This test originally had been included in the battery as a control measure. That is, it had not been intended to use it as a predictor of human relations success; it was included mainly in order to determine the effect of the "fluency" factor on the scores of the other tests. However, there is little likelihood that a relationship as high as that found between this test and the criterion could occur by chance. Also, it seemed reasonable that fluency of expression together with the personality factors associated with this ability, might be related to the ability to handle interpersonal problems successfully. Therefore, this test was incorporated with the other two tests for predicting success of supervisors of office workers.

The multiple correlation between these three tests *(Human Relations, Personal Interest Inventory,* and *Word Fluency)* and the ratings was .58 for supervisors of office workers. The correlation between the first two tests and the ratings for supervisors of trades and operating workers tests was .48.[2]

[2] A more complete report of the technical aspects of this study, describing in some detail the procedures used in developing the measures and the statistical analysis of the results, is scheduled to appear in Volume 63 (1951) of the *Psychological Monographs: General and Applied* (American Psychological Association, Washington, D.C.).

New Films . . . Tranquilizers & Traffic . . . Toll Road Fees

Ten police traffic training films have now been produced by the National Association of Automotive Mutual Insurance Companies. For a descriptive flier (Pub. No. 2156, "A Training Program on Film") write to the Traffic Institute or Dallas Jones Productions, 1725 N. Wells St., Chicago 14, Illinois. The American Automobile Association says that tranquilizer pills are suspect as an impairment to driving ability. . . . Also, says the AAA, it would cost a motorist $31.68 in tolls to drive the 2,190 miles on major U. S. turnpikes today.

COULD THE TESTS BE "THROWN"?

The supervisors who participated in the study were assured that all data collected would be confidential—that their scores on the tests would have no bearing on their standings, either in their departments or in the company. The question then arose as to what extent results obtained for applicants, highly motivated to get the highest scores possible, would differ. In order to get at least a partial answer to this question, twenty-two of the supervisors in one department were asked to retake the tests with instructions to attempt to get the highest scores possible on the tests by falsifying their answers. For example, on the *Personal Interest Inventory,* they were instructed not to give a true indication of their interests, but to mark the answers that they thought would score the most points according to the scoring key.

It was found that the average scores of the supervisors differed very little under the two conditions of administration. Comparing their scores on the second testing to those made in the original study (when they presumably gave honest answers), the differences in the average scores were insignificant. There was also found to be a fairly high relationship between scores that the individual supervisors made on the two administrations of the test. That is, the supervisors who scored high when the tests were first given also scored high this time, and vice versa.

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APPLICATION OF TEST RESULTS

In reporting the results of the study to the participating departments, it was emphasized that the purpose of this project was not to "take over" the selection of supervisors by means of tests. It was intended merely to provide a tool which would be available if and when help was needed by the persons responsible for selecting new supervisors. It was also emphasized that the tests supply information only in regard to the applicant's possibilities of being successful in handling the "human relations" aspect of supervision. The many other important aspects of supervision are not intended to be measured by the tests.

When the tests are administered to applicants, the results are reported in general terms. That is, the actual scores are not given. Usually, the results are reported by dividing the applicants into three or four groups, depending upon the distribution of scores. No finer discriminations are made than is actually warranted by the reliability of the test scores. The probability of success of the men in each group is estimated.

These results are reported in a conference with the persons responsible for making the appointment. The limitations of the test results again are emphasized. The importance of considering factors other than the "human relations" aspect is also stressed, and an attempt is made to coordinate the information from test results with other information about the candidates.

The results of the application of the tests in supervisory selection have thus far been very satisfactory. The utilization of the information provided by the test is only one of the benefits that has accrued. There are concomitant returns that cannot be underestimated. For example, those making the selection are encouraged to make a thorough study of the qualifications of each candidate. Very often more candidates are considered, so that there is less chance of overlooking a likely candidate.

In addition, it has been found to be valuable to administer the tests to persons who are potential supervisory material before openings occur. In this way, it is possible to observe more closely the most likely candidates, and to give them some try-out experience before an appointment must be made. ★★★

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STATISTICS FOR POLICE EFFICIENCY

By Dr. John I. Griffin

Statistical Methods as a Management Tool for Police Administrators

EDITOR'S NOTE: *The* JOURNAL *takes pleasure in launching as a new regular feature, this special section on* STATISTICS FOR POLICE EFFICIENCY, *edited by Dr. John I. Griffin. In recent years, there has been a marked increase in police interest in the application of statistical method to the solution of police problems. Dean O. W. Wilson's book,* POLICE RECORDS AND THEIR INSTALLATION *has continued to focus police attention in this country on the use of records in the analysis of emerging situations, in the anticipation of problems and the development of plans, in addition to other important applications. As a special service to the field, this section of the* JOURNAL *will make available to law enforcement personnel the latest information on the use of statistical procedures in meeting police problems successfully at every level, from the administrator through supervisory and command personnel to the detective and patrolman.*

Dr. Griffin brings to this assignment qualifications giving assurance to readers of POLICE *everywhere that here is something they cannot afford to miss in the issues ahead. Holder of the Ph.D. degree from Columbia University, he is Associate Professor of Economic Statistics at The Bernard M. Baruch School of Business and Public Administration, The City College of New York, where he has been Supervisor of the Police Science Program since its inception in 1955. There are now almost 1500 law enforcement officers enrolled in this program. Dr. Griffin is the author of a number of books in his special sphere of interest, including* STATISTICS ESSENTIAL FOR POLICE EFFICIENCY *(Charles C Thomas, Publisher, 1958) and has been a regular contributor to the professional journals. At The City College of New York, he teaches courses on Police Statistics. He has also lectured before the Conference on Modern Methods of Law Enforcement at New York University in 1955 and at the Southern Police Institute, University of Louisville, in 1957.*

THIS new section in POLICE will be devoted to reporting, analyzing and interpreting developments in the field of statistical methods with current or potential applications to police administration. The purpose, therefore, is to assist in the development of statistical methods as a management tool for police administrators. It is hoped that a wider understanding of the direct usefulness of statistics will encourage law enforcement personnel of all ranks to take a direct personal interest in the quality of reporting work, even if their assignments do not involve records or statistical duties. From the exchange of professional experiences in the columns of this JOURNAL new horizons can be opened up. Those who say that figures can prove anything and those who assert that they can prove nothing are equally in error. The truth is that statistical methods are like any other powerful tool—its use requires an understanding of its capabilities and limitations, intelligence and common sense in its use, guided by the hand of experience.

TELLING THE POLICE STORY

Statistics concerns itself with numerical data which are the consequence of the process of counting or of measuring. The kind of information which is traditionally found in a police department annual report is essentially descriptive. It includes information on the personnel in the department, reported crime, traffic statistics and the like. The great investment of time and effort in the preparation of an annual report can be made more effective by imaginative methods in telling the police story. Many departments are now producing annual reports using the best current practice in tabular and graphic presentation. In doing so, a comparatively small direct investment is made to yield large dividends of favorable public relations within the community. The police story, its needs and problems, is competing for public attention with countless other newsworthy stories and insofar as effective statistical presentation can help in getting attention, it constitutes a tool which should be used. Police administrators have become aware that the public, generally thought to be allergic to statistics, is actually eager for the facts in regard to their police departments and the dimensions of crime. Unfortunately the facts are frequently made difficult to grasp by poor presentation.

Within a department a constant flow of statistical reports moves from command and administrative units to the desk of the Chief and, in many cases, on to state and federal agencies. One of the most challenging problems in statistical administration in business organizations, as well as public agencies, is to assure the understanding and acceptance of the necessity for statistical reporting on the part of those required to make the reports. This problem is not unfamiliar in law enforcement agencies

as well. Acceptance of statistical reporting can be complete and genuine only if the reports make sense and the end products are seen by all and recognized as useful.

When internal reports, which are essentially statistical in character, are also used for the purpose of judging the efficiency of commanders and administrators, pressure may develop which in acute cases has been known to lead to suppression and manipulation of reported figures. Again, this problem is not unique in the field of police statistics. Such pressures develop in the political sphere in respect to economic and social data and have required great efforts to maintain statistical integrity. Understanding of the proper role of data reporting and the need to assure truthful statistics is important for the top administrator.

STATISTICAL COOPERATION

The development in the past quarter century of a system of *Uniform Crime Reports* has been a significant contribution made by police administrators to our knowledge of this important segment of human activity. In fact, the cooperative relationships which exist between the Federal Bureau of Investigation, the individual law enforcement agencies and the International Association of Chiefs of Police as advisor, are a model of effective statistical administration uniquely suited to the American tradition. The educational consequences of this program have been seen in the introduction and maintenance of acceptable reporting methods in a very large number of police departments, both large and small. On the basis of present achievement the *Uniform Crime Reports* should form the foundation for a truly adequate statistical system. Discussions and critiques of the reports leading to more extended use may well suggest the directions in which this statistical system should move. Tentative steps have been taken by international organizations in the direction of a system of international criminal and police statistics.

Analysis and survey units in police departments frequently are assigned problems for study which involve the assembling, presenting, analyzing and interpreting of masses of statistical data. Such problems as efficient assignment of the patrol force, measurement of "work performance" and the like, call for the use of considerable ingenuity in developing suitable data. The several different approaches to the allocation of man power, which have been used in American cities, suggest the need for further research and exchange of experiences before a standard procedure can be said to have emerged.

COMMUNITY DATA

Descriptive statistics of importance in the defining of the police problem in a community come from sources external to the police department itself. Thus, data on the characteristics of the population, economic and social conditions, characteristics of housing units and school statistics, are important. Administrators should know what types of data are available for their community and assign personnel to establish liaison with community agencies originating and analyzing such data. The ever growing scope of statistical work is suggested by the fact that in a number of cities representatives of the police department serve as members of statistical committees dedicated to the objective of coordinating information in respect to all phases of the community. Such local groups are playing an important part in the planning work preparatory to the next decennial census of population to be taken in 1960. To a certain extent the types of small area data, which will be made available as a result of this census, depend on the expression of local community needs for these data. It would appear to be consistent with the modern approach to law enforcement to suggest that any data, which help us to understand the characteristics of our community, thereby help the police administrator in discharging his responsibilities.

In the process of expediting the collection and tabulation of data, police agencies have used semi-mechanical and mechanical methods ranging from Keysort cards through punch card machines. The use of mark sense cards at the data-originating level is spreading slowly. While the input of data may not be sufficient to justify the use of high speed electronic computers on a purchase or rental basis, an understanding of the potential of these newer machines is important. Certain statistical problems, which appear to be beyond present resources of personnel and funds may lend themselves to solution if programed for high-speed computers, the services of which are used on an hourly or service bureau basis.

SAMPLING METHODS

Although the statistical methods most commonly employed in police administration are descriptive methods, interest is growing in the use of methods of statistical inference. In other fields of applied statistics a similar shift in emphasis has been seen in recent years from description to inference. Inferential methods involve the use of sampling. Samples, as contrasted with complete counts, result in substantial savings of cost and time but, of course, involve incomplete information. The problem therefore is to make a correct decision in the face of uncertainty. Many statisticians now think of their subject as primarily a body of methods for "decision making." The process of making right decisions or in other words accepting correct hypotheses and rejecting incorrect hypotheses, is the very keystone of management. This is intelligent problem-solving and statistical inference is a vital contribution to this process.

Sampling schemes find their application in police administration in two major ways. In the first place they may be used to gain information in respect to the characteristics of a large mass of data such as reports, files

and the like. It may not be practical to make a complete investigation of the data and sample information can then be used. In the second case sample surveys may be made to provide new information for the police administrator. This kind of work is perhaps best known to the public through its use in sampling political opinion and in market research studies. Many of the key economic indicators used to identify business booms and recessions are based upon sample information obtained from very small samples. Quality control involving the sampling of a physical attribute of a manufactured product, such as length of life of a light bulb, has become well established in American industry.

Police administrators have had notable success in applying modern scientific advances to the police service. Examples at once come to mind in such fields as communications, scientific interrogation and chemical analysis. The science of statistics stands ready to add its bit. In this sense statistics essential for police efficiency constitute a management tool. This new section in POLICE is dedicated to this proposition. ★★★

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Be Thankful for the Police

By D. A. Delafield

I have found policemen to be, as a whole, a respectable class of men—alert, keen-minded, physically strong, and usually with character and intelligence above the average. They are among our finest citizens. Good-looking uniforms help to make them the symbols of law and order they are intended to be.

A feeling of civic pride and security comes over me when these officers of the law appear on the streets of our cities and highways. Their colorful patrol cars with bobbing radio antennas, revolving red lights, and sirens, send a thrill down my backbone as I watch them race away to the scene of duty.

We have all had enough experience with policemen to know that we can count on them for the kind of help no one else can give. For example, one night in the wee hours I was disturbed by two drunken men quarreling in front of my home. One of them cursed the other and struck him in the face, knocking him down. I lifted the telephone receiver and dialed the police. Within five minutes the patrol car was on the scene handling the situation.

Yes, we should be thankful for the police. But this isn't enough. As citizens, we share responsibility with the police force for the well-being of society. It is our business to obey the law, and to teach our children that the policeman is their friend. It is the policeman's business not only to obey the law but to enforce it.

Public conduct is reflected in the conduct of the police department. Where the public is law abiding, demanding a circumspect police force and requiring serious law enforcement, such law enforcement is forthcoming.

City, state, and national police agents are chosen by the people directly or indirectly. They are the servants of the people, and they reflect the character of the public they serve. Where there is wholesale lawlessness and corruption among the citizens, it is easy to see how this general immoral condition can seep into the very fabric of the agency dedicated to its suppression.

There are a few bad policemen, but most police officers are loyal to their trust. And don't forget, theirs is a dangerous business. They serve the public at the risk of their lives. Let's not allow their morale to be broken by confused gossip. It is for us as citizens to get behind the business of good government and show by our works that we will stand behind a vigorous law-enforcement program. This is as much a part of good living as church attendance and prayers for peace.—*Life and Health*, July, 1955.

News and Announcements

LEARNS DETAILS OF POLICE WORK

Capt. Yoo Hee-joing, of the Korean national police, receives information on how Illinois state police make out a crime report from Ervin H. Warren, assistant superintendent. The captain was studying state police operations here.

A NEW HIGH-SPEED LENS OF MEDIUM FOCAL LENGTH—THE SCHNEIDER XENON 80MM F/2

is now available for the Swiss Alpa 35 mm single-lens Reflex Camera. Ideal for rapid action, work under extremely dim lighting conditions, the lens has an actual maximum aperture of about F/1.9: thus when the diaphragm is set at the first calibration F/2 it is slightly stopped down for the purpose of removing any edge softness.

In a rugged black and satin-chrome mount, the Schneider 80mm F/2 has click stops up to F/16, focuses down to three feet, and is equipped with a depth of field scale engraved on the barrel. The front of the lens mount is provided with the standard Alpa filter-fitting, a groove-and-spring arrangement for easy instant placement of the Alpa coated glass filters. The reversible Alpa lens shade also fits snugly over the front of the lens.

The greater-than-normal magnification (60% larger image size than obtained with the standard 50mm lens) makes the Schneider Xenon 80mm F/2 highly suitable for portraiture, photo journalism, close-ups and wherever it is desirable to increase the image size without changing the camera position.

For further information write Karl Heitz, Inc., 480 Lexington, New York 17, N. Y.

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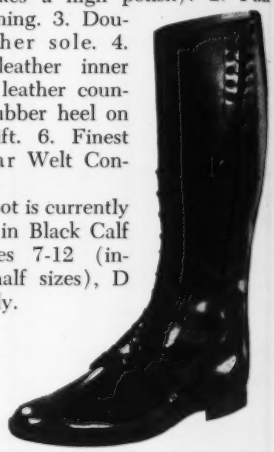

IDENTIFICATION OF OFFICERS IN PHOTOGRAPH AT INDIANA JUVENILE CONFERENCE

First row, left to right: Mrs. Virginia Carroll, Director of Welfare, Posey County, Mt. Vernon, Indiana; Sgt. Raymond L. Tryon, Police Dept., Terre Haute, Indiana; Sgt. Frederick Sumpter, Police Dept., New Castle, Indiana; Patrolman John D. Conn, Juvenile Aid Division, Muncie, Indiana; Mrs. Elvera M. Riggs, Sheriff's Office, Vanderburgh County, Evansville, Indiana.

Second row, left to right: Loren Ayres, Acting Chairman, Dept. of Police Administration, Indiana University, Bloomington, Indiana; Sgt. of Detectives Glen L. Kindy, Police Dept., Goshen, Indiana; Patrolman Kenneth G. Cage, Police Dept., Anderson, Indiana; Fred E. Zeigler, Juvenile Officer, Police Dept., Columbus, Indiana; Patrolman George N. Luallen, Police Dept., Bedford, Indiana; Dan Metrione, Chief of Police, Richmond, Indiana; Michael G. McCann, Instructor, Police Administration, Indiana University, Bloomington, Indiana.

Third row, left to right: Capt. Kenneth C. Smith, Police Dept., Elkhart, Indiana; Patrolman Charles R. Johnson, Juvenile Division, Evansville, Indiana; Detective John D. Rawlins, Police Dept., Bloomington, Indiana; Lt. Robert E. Plunkitt, Juvenile Aid Division, City Police Dept., Frankfort, Indiana; Patrolman Troy B. Woolf, Jr., Police Dept., Richmond, Indiana. Captain Ryan, Richmond Police Department, Richmond, Indiana.

Fourth row, left to right: Patrolman Cyrille W. Hanssen, Police Dept., Evansville, Indiana; Frederic Schneidewind, Police Services Consultant, Division of Juvenile Delinquency Service, Washington, D. C.; Sgt. John N. Kopca, Police Dept., Mishawaka, Indiana; Detective Sgt. Alfred Marley, Police Dept., Hammond, Indiana; Sgt. Harlen Graf, Police Dept., Peru, Indiana.

POLICE GET NEW CRASH HELMET

A new crash helmet, adopted for the safety of motorcycle police officers was inspected recently by Police Commissioner Stephen P. Kennedy of the New York City Police Department. The football-like helmet, which will be standard equipment for the men, weighs twenty ounces. It has a laminated shell of fiberglass with a plastic and foam rubber lining. The helmets were selected after a four-month field test. The criterion was the protection afforded the wearer and the headgear's durability and comfort.

QUALECTRIC TURN SIGNAL FLASHER

An automotive turn signal Flasher that has longer life, more instant flashing response, greater audibility and safety, is now in production at the Qualectric Corporation, 990 East 67th Street, Cleveland 3, Ohio.

The new multi-purpose 6 and 12 volt automotive directional turn signal Flashers have many advantages over the conventional Flashers that are now on the market. A new construction design, that has a patent pending, includes a special closed circuit wiring arrangement to provide instant and unvarying rate of flashing in compliance with S.A.E. specifications. Long dependable operating performance, instant flashing action, greater electrical system protection and economy are afforded with these flashers. Indicating lamps

light immediately, upon the closing of the turn signal switch, resulting in safer vehicle operation. Damage to the electrical system is prevented and the life of the lamp bulbs is increased tremendously because the increased surge currents, that occur when the engine is started, have been eliminated. A loud, audible clicking sound is generated by the Flasher to clearly indicate that the turn signal is on.

The new Qualectric Flashers have surpassed S.A.E. Class A test requirements. They have been engineered to meet the exacting specifications of automotive engineers.

Literature, price lists or additional information may be had on request. Similar Flashers for higher or lower voltages will be added to the line at a later date.

WESTERN RESERVE UNIVERSITY SCHEDULES TRAINING INSTITUTE

Western Reserve University's Law-Medicine Center, sponsored in cooperation with the Cuyahoga County Coroner's Office, has scheduled its fifth annual Institute on Science in Law Enforcement for June 16-21 on the campus in Cleveland, Ohio.

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Tuition is $75 per person. Housing for men in Claud Foster Hall for the week is $15. Additional housing information will be sent on request.

For further information contact Oliver C. Schroeder, Jr., director, the Law-Medicine Center, Western Reserve University, Cleveland 6, Ohio; CEdar 1-7700, ext. 635.

ALUMINUM PLUMBING FIXTURE NEWS

Aluminum Plumbing Fixture Corp. announces its new catalog, which shows its expanded line of Super Secur Ware unbreakable plumbing fixtures. These fixtures are recommended primarily for institutional use, or wherever fixture breakage is possible.

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REFUSAL

"I DON'T THINK OUR CURRICULUM SHOULD BE USED FOR REHABILITATION" is the remark of a dean of a prominent state university which refused to let a state penitentiary inmate take an extension course by mail. Said a metropolitan newspaper commenting on the refusal: "The dean seems to feel the university would in some way be tainted by the association. He could more constructively look on the convict's appeal as an opportunity for his institution."

INTERPOL

Next September the International Criminal Police Organisation is to hold its annual conference in London. Britain's representative—Mr. R. L. Jackson, the Assistant Commissioner in charge of the Metropolitan Police C.I.D.—will be host to delegates from the fifty-eight member countries and a week will be devoted to discussions on various aspects of crime. Support for Interpol has grown steadily since the end of the war, and its members now include many countries outside Europe. The annual conference provides the opportunity for a personal exchange of views and information by the senior C.I.D. officers of many countries and is a valuable addition to the routine work of the organization. Crime knows no frontiers, especially in the days of air travel, and one of the most useful functions performed by Interpol is the maintenance of an international system of communications. The headquarters of the organization are at Paris, and from there a Police radio network covers all European countries outside the Iron Curtain. Information about international criminals is regularly circulated, and the speedy dispatch of this information has led to many arrests. Interpol also has a branch office in Holland which specializes in the detection of forgery and counterfeiting. This has proved of great value in checking the activities of gangs who operate internationally and are responsible for making and circulating forged notes. The many activities of the organization are recorded in the INTERNATIONAL CRIMINAL POLICE REVIEW, a monthly journal printed in four languages and issued for the private information of the members. Interpol rightly eschews publicity about all its undertakings, but the fact that little is heard about it does not mean that its work is not of great value.

40,000

THERE ARE ABOUT 9,000 PROBATION AND PAROLE OFFICERS in the United States, according to the National Probation and Parole Association. Based on a caseload of 50 we need about 40,000 says NPPA Executive Director Will Turnbladh.

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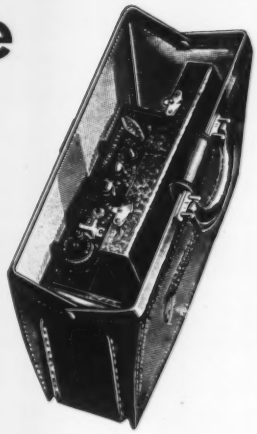

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